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Val Pro Ile Leu Val Leu Thr Ala Arg Asp Ala Val Asp Asp Arg Val
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Asp Gly Leu Asp Ala Gly Ala Asp Asp Tyr Met Val Lys Pro Phe Ala
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Lys Ala Pro Pro Trp Ala Glu Val Gly Phe Arg Leu Trp Ile Ser Gly
Leu Gly Pro Gly Arg Ser Pro Val Phe Pro Leu Leu Ser Leu Gly Ser
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Leu Gly Ala Pro Leu Arg Ser Lys Gly Ala Cys Leu His Gly Ser Arg
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Leu Leu Gln Glu Leu Pro Ala Asp Glu Ser Pro Gly Pro Gly Ala Pro
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Pro Gly Ala Gly Val Met Leu Leu Ala Arg His Thr Gly Pro His Pro
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Asp Phe Leu Lys Ala Gln Gln Lys Tyr Thr Asn Ile Val Lys Glu Met
                            40
Lys Ala Lys Asp Leu Glu Ile Arg Ile His Lys Lys Lys Cys Glu
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50
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Ile Tyr Arg Arg Leu Arg Glu Leu Ala Lys Leu Tyr Asp Thr Ile Arg
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                                        75
Asn Glu Arg Asn Lys Phe Val Asn Leu Leu His Lys Ala His Gln Lys
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                85
Val Asn Glu Ile Lys Glu Arg His Lys Met Ser Leu Asn Glu Leu Glu
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                                105
                                                     110
Ile Leu Arg Asn Ser Ala Val Ser Gln Glu Arg Lys Leu Gln Asn Ser
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agcagatcac atgcaatttt tacaatcagc atttgtcaag ttcataaaaa tatggaggca
getgaagatg gateatggta tteecetegg catattgtet caaagtteea etttgtggat
240
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                                25
                                                    30
Thr Thr Gln Met Asn Glu His Ser Ser Arg Ser His Ala Ile Phe Thr
                            40
                                                45
Ile Ser Ile Cys Gln Val His Lys Asn Met Glu Ala Ala Glu Asp Gly
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                        55
Ser Trp Tyr Ser Pro Arg His Ile Val Ser Lys Phe His Phe Val Asp
                                        75
Leu Ala Gly Ser Glu Arg Val Thr Lys Thr Gly Asn Thr Gly Glu Arg
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90
Phe Lys Glu Ser Ile Gln Ile Asn Ser Gly Leu Leu Ala Leu Gly Asn
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                                                   110
            100
Val Ile Ser Ala Leu Gly Asp Pro Arg Arg Lys Ser Ser His Ile Pro
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Tyr Arg Asp Ala Lys Ile Thr Arg Leu Leu Lys Asp Ser Leu Gly Gly
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aaaggetaga gtetggggae caagteeeca geteegttta egegaettee ttgaeettgt
ttgttatgct gataaggtta ttcagcttga cgatttgttc gtggtctttc aaccgttttg
cagetggteg aegatattee tggtaggaac taegatagaa gaecageate ggaagaaett
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Gly Pro Ser Pro Gln Leu Arg Leu Arg Asp Phe Leu Asp Leu Val Cys
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Tyr Ala Asp Lys Val Ile Gln Leu Asp Asp Leu Phe Val Val Phe Gln
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Pro Phe Cys Ser Trp Ser Thr Ile Phe Leu Val Gly Thr Thr Ile Glu
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Asp Gln His Arg Lys Asn Phe Val Asp Ala Glu Gln Thr Pro Thr Asp
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887

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gtggtggaag agagcgtatt agaaggcctc gatacctatt tatgtgagat aaaagaagca
240
cagattegte atggattgea tegtettgga gaattaceag aagaegataa attggeegat
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420
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423
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Leu Arg Glu Gln Ile Leu Lys Lys Val Gln Glu Thr His Leu Leu Glu
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Glu Leu Ala Gly Ile Glu Ser Gly Asp Asp Gly Ala Val Val Glu Glu
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Ser Val Leu Glu Gly Leu Asp Thr Tyr Leu Cys Glu Ile Lys Glu Ala
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                                        75
Gln Ile Arg His Gly Leu His Arg Leu Gly Glu Leu Pro Glu Asp Asp
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                85
                                    90
Lys Leu Ala Asp Thr Leu Val Ala Leu Leu Arg Leu Pro Arg Gly Ser
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Asp Ile Thr Ser Lys Gly Ile Leu His Ala Leu Met Ala Asp Leu Glu
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                           120
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Leu Glu Gln Asp Asp Phe Asp Pro Met Gln Ser Thr Arg
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                                            140
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Ile Gly Thr Ser Asn Lys Met Glu His Gly Ala Asp Gly Ala Leu Ser
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                                25
Lys Met Glu Arg Gly Val Asp Arg Ala Trp Ser Lys Lys Glu Leu Gln
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Ala Arg Trp Ser Leu Gln Gln Val Leu Leu Ser Val Arg Trp Ser Ser
                                            60
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Glu Lys Met Met Leu Arg Val Arg Leu Ser Ser Val Ile Gly Thr Pro
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Asn Ile Ala Leu Ser Pro Leu Glu Xaa Leu Ser Arg Lys
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cctggtgaca gggtggagac ccctgtgggg gagagagccc caacccctgt ctcagcaagc
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tetgageage eteccaacag egteetgeet gacaaactga aggtgagetg ggagaacece
300
agececcagg aggecectge tgeagagagt geagaacegt eeeaggeace etgttetgag
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tcagagaaac tgaaa
435
<210> 858
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Phe Leu Ala Pro Glu Thr Thr Ser Pro Gly Asp Arg Val Glu Thr Pro
                            40
                                                45
       35
Val Gly Glu Arg Ala Pro Thr Pro Val Ser Ala Ser Ser Glu Val Ser
                       55
                                            60
Pro Glu Ser Gln Glu Asp Ser Glu Thr Pro Ala Glu Glu Asp Ser Gly
                    70
                                        75
Ser Glu Gln Pro Pro Asn Ser Val Leu Pro Asp Lys Leu Lys Val Ser
                                    90
Trp Glu Asn Pro Ser Pro Gln Glu Ala Pro Ala Ala Glu Ser Ala Glu
                               105
           100
Pro Ser Gln Ala Pro Cys Ser Glu Thr Ser Glu Ala Ala Pro Arg Glu
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                        120
                                               125
Gly Gly Lys Pro Pro Thr Pro Pro Pro Lys Ile Leu Ser Glu Lys Leu
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                    135
Lys
145
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<211> 561
<212> DNA
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120
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890

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Pro Ser Ala Lys Ser Ser Leu Glu Pro Ser Lys Arg Gln Gly Arg Gln
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Val Thr Val Val Gly Val Arg Ile Val Ser Thr Met Asn Pro Ile Leu
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Gly Ala Asp Met Thr Thr Tyr Gln Tyr Leu Ile Val Gly Gly Met
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Ala Ala Asp Ser Ala Ala Arg Gly Ile Arg Asp Ile Asp Lys Lys Gly
              85
                                  90
Ser Ile Ala Ile Leu Ser Ala Asp Val Asp Ala Pro Tyr Pro Arg Pro
                              105
                                                 110
          100
Ala Leu Ser Lys Lys Leu Trp Thr Asp Pro Glu Phe Thr Trp Asp Gln
                           120
                                              125
      115
Val Asp Leu Ala Thr Val Ala Asp Thr Gly Ala Glu Leu Arg Leu Gly
                       135
                                          140
Thr Glu Val Leu Ser Ile Asp Arg Asp Gly Lys Thr Val Leu Thr Ala
                                      155
145
                 150
Ser Gly Gln Val Phe Gly Tyr Gln Lys Leu Leu Leu Val Thr Gly Leu
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              165
Thr Pro Ser Arg Ile Asp Asp Asp Gly Asp Ala
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       , 20
                                25
Trp Arg Tyr Met Asp Phe Ser Ala Pro Val Arg Ser Val Ser Thr Gly
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                                               45
His Leu Lys Ser Pro Tyr Arg Gly Leu Ser Gln Cys Leu Arg Pro Ile
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                                            60
   50
Arg Gly Val Ser Phe Gln Pro Ser Val Leu Glu Ala Ile Cys Met Gly
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                                        75
Ser Gln Ser Leu Pro Arg Glu Trp Gln Lys Leu Ala Gly Ala Trp Arg
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Gly Leu Cys Leu Phe His Cys Phe Gln Gly Gly Leu Pro Gln Gly Arg
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Asn Trp Gly Gly
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<211> 327
<212> DNA
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Asn Phe Lys Ser Gly Phe Thr Leu Asn Met Phe Arg Gln Ala Ala Met
           20
Tyr Asn Lys Pro Met Pro Ser Glu Asp Gly Arg Lys Pro Met Leu Leu
                           40
                                               45
        35
His Ile Ser Tyr Glu Gln Ser Val Asn Glu Asn Tyr Arg Asn Val Tyr
Ser Gln Leu Lys Leu Asn Glu Thr Gly Glu Arg Val Asp Met Arg Lys
                   70
                                       75
Leu Asp Ile Glu His Val Thr Ala Tyr Val Lys Glu His Leu Glu Val
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95
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                                    90
Asn Gly Trp Thr Val Glu Phe Val Arg Val Asp Pro
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<212> DNA
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totcagaact ttotgtttcc atggcotcot otgccacotc tgccacotcc cotgatgtgc
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300
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360
caqaaaccat gagggtggat ctccggaggt catcgatgtg gacagactgc cacagccctc
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cgtggaagcc cacataggct gttcctcttc ccacccggga cagttttgtg atgaaataga
cgaagatacg gtcctcattt tctcgtattt tgttgatttc atttataaca gaatacttag
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Pro Gly Ser Thr His His Cys Leu Arg Val Gln Arg Phe Pro Phe Pro
                                                    30
            20
Pro Ser Gln Asn Phe Leu Phe Pro Trp Pro Pro Leu Pro Pro Leu Pro
                            40
                                                45
        35
Pro Pro Leu Met Cys Trp Pro Pro Ser Pro Ser Pro Pro His Gly Arg
                        55
                                            60
Leu Pro Pro Gly Val Pro Ser Pro Ala Gln Ala Ser Leu Arg Ala Arg
65
                    70
                                        75
Thr Ala Gly
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240
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gettgaggag ggcacgaagg teetggeact teteataget geecagetee acagteteea
360
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Ser Pro His Thr Ser Asp His Pro His Ser His Arg Pro Ala Ala Gly
            20
                                25
Pro Gly Arg Gly Ala Asp Ile Gly Leu Ser Arg Asn Pro Gly Gly Pro
       35
                            40
His Cys Ser Ser
    50
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gegtgcacca tgctgttctg cetggegtcg gggcatttcg acttgtcggt gggctcggtg
180
atogootgtg coggtgtggt cgcggggatt gtgattcgtg acaccgatag cgtggcactc
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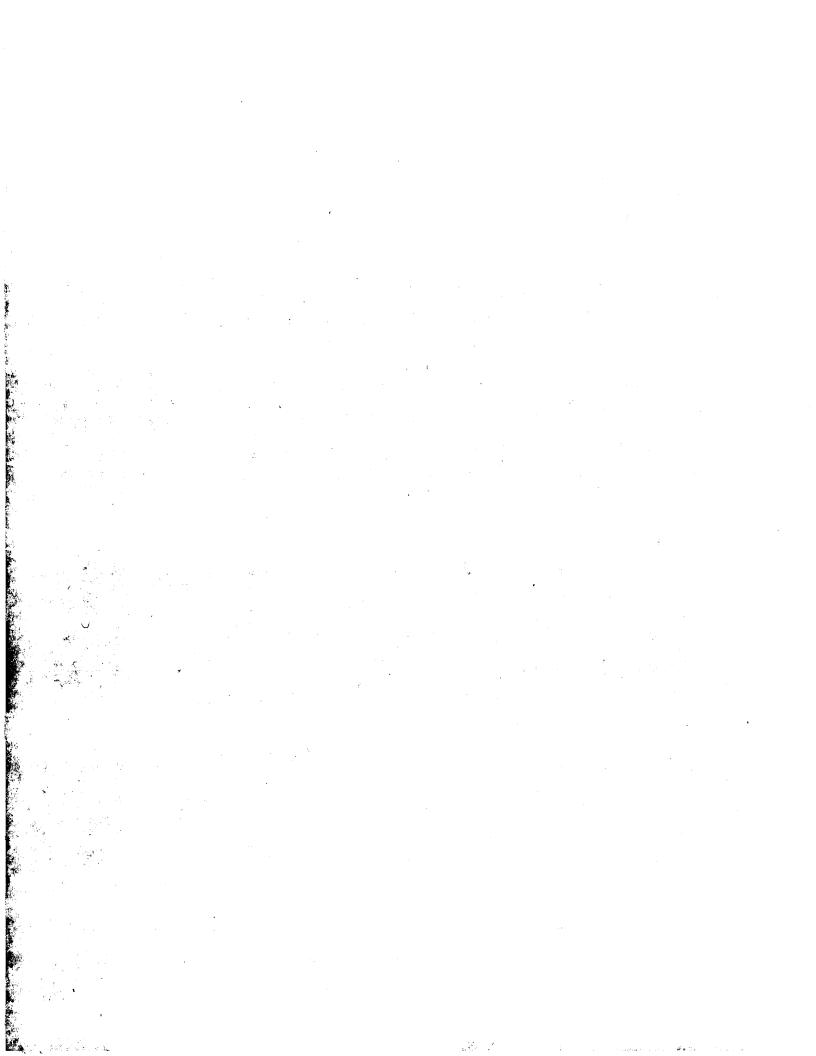
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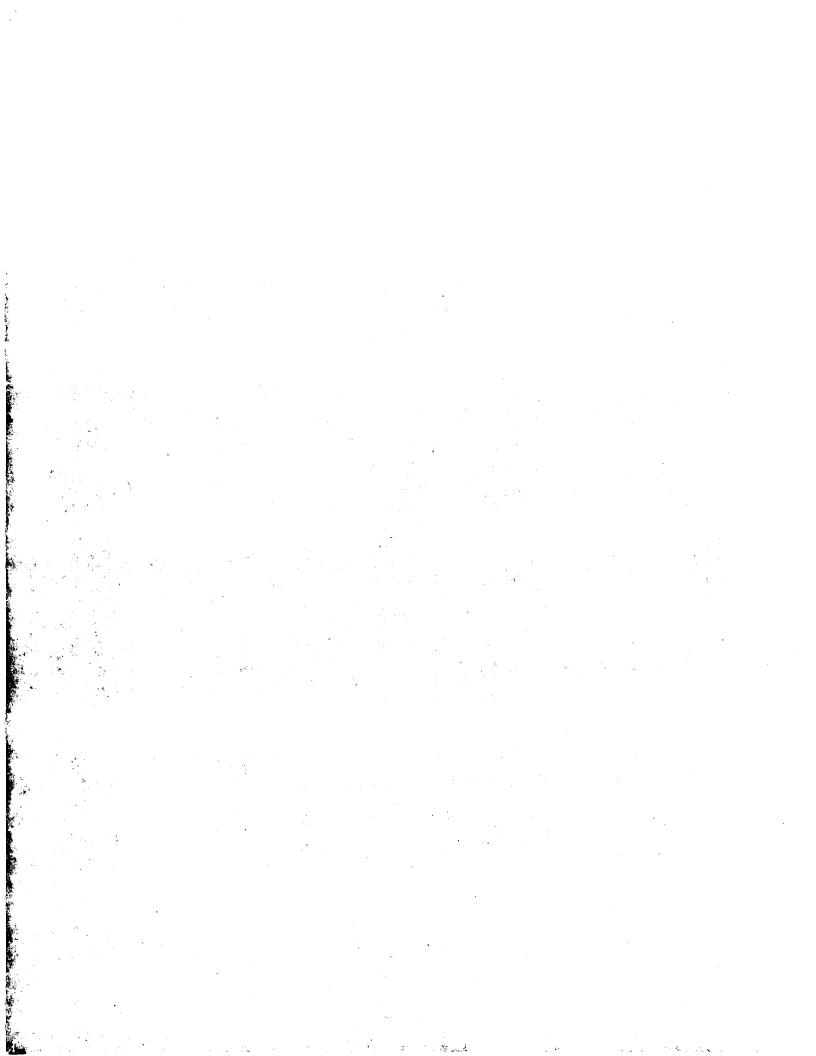
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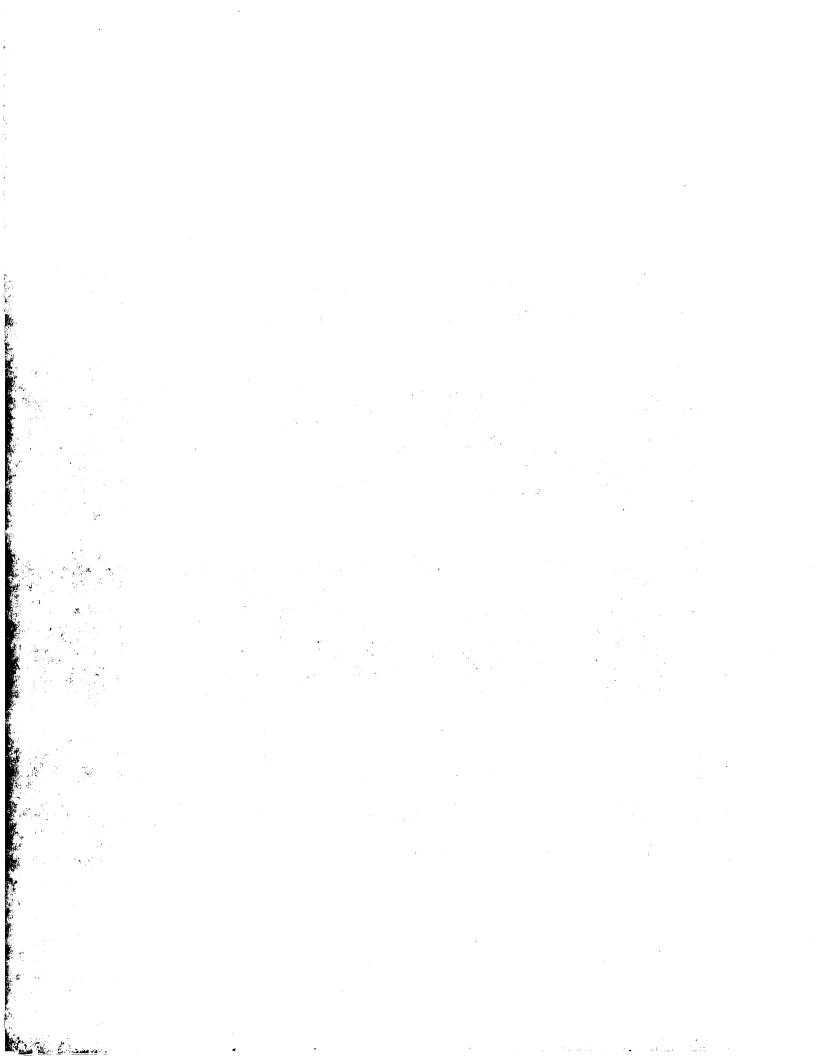
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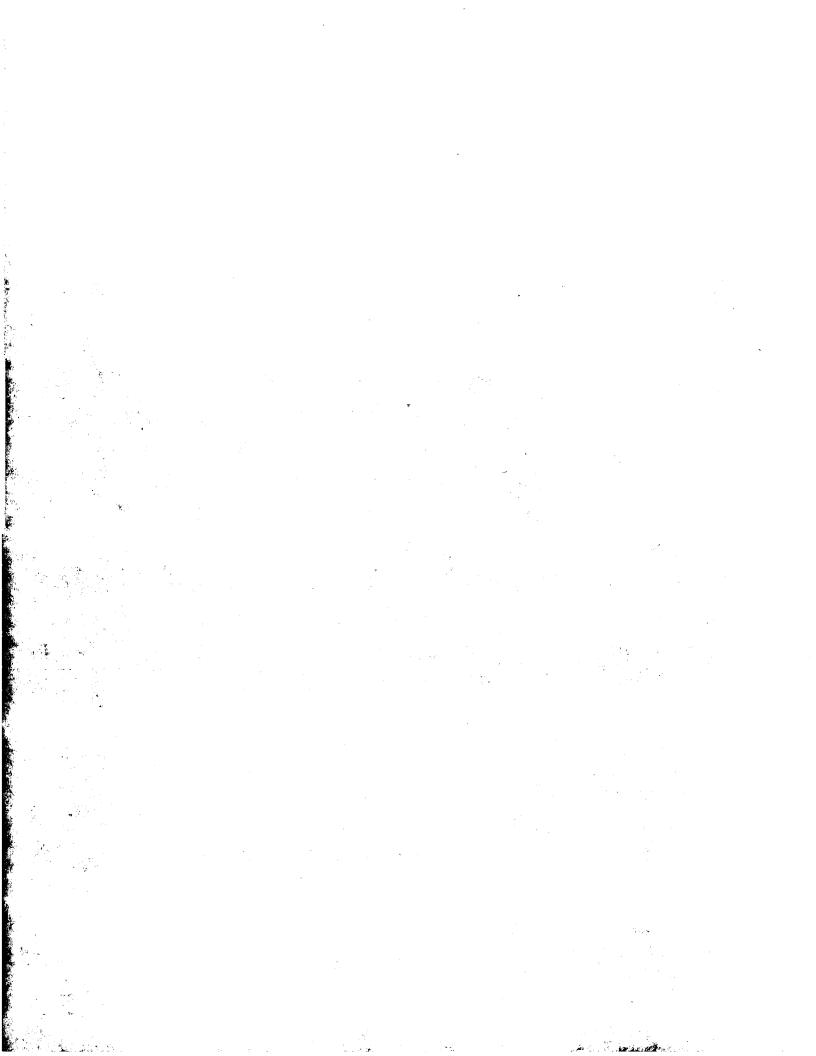
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Pro Val Leu Val Gly His Leu His Leu Arg Ile Leu His Leu Ala Asn
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Asn Gln Leu Gln Thr Phe Pro Ala Ser Lys Leu Asn Lys Leu Gln Gln
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Leu Glu Glu Leu Asn Leu Ser Gly Asn Lys Leu Lys Thr Ile Pro Thr
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Val Leu Glu His Lys Thr Leu Asp Ile Phe Ser His Ile Thr Thr Leu
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Lys Ile Asp Gln Lys Pro Leu Pro Thr Thr Asp Ser Thr Val Thr Ser
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Thr Phe Trp Ser His Gly Leu Ala Glu Met Ala Gly Gln Arg Asn Lys
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Len	Cvs		Ser	Ala	Leu	Ala		Asp	Ser	Phe	Ala		Gly	Val	Gly
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Ser	Thr	Asn	Asp	Thr	Val	Phe	Met		Asn	Thr	Phe	Leu	Val	Ser	His
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Arg	Lys		Gly	Met	Ala	Gly		Lys	Leu	Gly	Ser		Ala	Leu	Leu
_	_	275	_	_	_		280					285	n)		T
Cys		Ile	Arg	Pro	Asp		Ala	Asp	Pro	АТА		ser	Pne	ser	Leu
	290		•	7	01	295	~	61 -	*1.	17.3	300	Crea	A	01	Glar
	vai	Ата	Asn	vai		Inc	Cys	GIR	Ald	315	Leu	Cys	ALG	GIY	320
305	Dro	1/-1	Pro	T 011	310	Luc	Va l	Dha	Car		Glu	Gln	Δsn	Pro	
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Glu	Δla	Gln	Arg		LVS	Asp	Gln	Lvs		Ile	Ile	Thr	Glu		Asn
GIU	AIG	0111	340	•	2,0		02	345					350		
Lvs	Val	Asn	Gly	Val	Thr	Cvs	Cvs		Arg	Met	Leu	Gly	Cys	Thr	Tyr
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Leu	Tyr	Pro	Trp	Ile	Leu	Pro	Lys	Pro	His	Ile	Ser	Ser	Thr	Pro	Leu
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Thr	Ile	Gln	Asp	Glu	Leu	Leu	Ile	Leu	Gly	Asn	Lys	Ala	Leu	Trp	Glu
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His	Leu	Ser	Tyr	Thr	Glu	Ala	Val	Asn		Val	Arg	His	Val		Asp
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Pro	Leu	Ala	Ala	Ala	Lys	Lys	Leu		Thr	Leu	Ala	Gln		Tyr	GIY
_	~ 1	_	420	••- 1	01			425	11- 1	т	Y 4	N a m	430	C1	Clu
Cys	GIn		Ser	vai	GIA	Ата	440	vai	vai	ıyr	Leu	445	TIE	Gry	GIU
C1	Clu	435	Thr	Carc	Glu	Mat		Gly	t en	Thr	Len		Glv	Pro	Val
GIU	450	СуБ	1111	Cys	GIU	455	ASII	GLY	DC u	****	460		Q.1.J		
Glv		Ala	ser	Thr	Thr		Ile	Lvs	Asp	Ala		Lys	Pro	Ala	Thr
465					470			-	-	475		•			480
Pro	Ser	Ser	Ser	Ser	Gly	Ile	Ala	Ser	Glu	Phe	Ser	Ser	Glu	Met	Ser
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Thr	Ser	Glu	Val	Ser	Ser	Glu	Val	Gly	Ser	Thr	Ala	Ser		Glu	His
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Asn	Ala	_	Gly	Leu	Asp	Thr		Leu	Leu	Pro	Arg		Glu	Arg	Arg
_	_	515	•	_			520	~	~ 3	•	D1	525	7	G1-	D
Cys		Leu	His	Pro	Thr		Thr	Ser	GIÀ	ren		GIN	Arg	GIN	Pro
C	530		77 1	Db.		535	3.00	C1-	Com	7.00	540	<i>a</i> 1.4	Lan	Λen	Sar
545	ser	Ald	Thr	PILE	550	Ser	ASII	GIII	Ser	555	Maii	Gry	DCu	r25	560
	Acn	Aen	Gln	Pro		Glu	Glv	Val	Tie		Asn	Glv	Ser	Lvs	
, wp	лэр	лэр	0111	565	741	014	017		570			1		575	
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Gly	Met	Leu	Leu	Pro	Met	Ser	Lys	Asp	Arg	Met	Glu	Leu	Gln	Lys	Ser

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625
Pro Ser Thr Ser Cys Leu Tyr Gly Lys Lys Leu Ser Asn Gly Ser Ile
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Val Pro Leu Glu Asp Ser Leu Asn Leu Ile Glu Val Ala Thr Glu Val
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                                                   670
Pro Lys Arg Lys Thr Gly Tyr Phe Ala Ala Pro Thr Gln Met Glu Pro
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                           680
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Glu Asp Gln Phe Val Val Pro His Asp Leu Glu Glu Glu Val Lys Glu
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Ser Phe Gln Arg Leu Met His Trp Val Thr Arg His Cys Lys Arg Pro
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                                           60
Gln Ile Ala Gln His His Leu Thr Phe Thr Pro His His Ile Asn Ile
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Gln Lys Thr Pro Leu Met
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                            40
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Pro Cys His Pro Arg Asp Cys Ser Pro Ile Leu Tyr His His Glu Val
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Gln Lys Ile Pro Ser Cys Glu Phe Ser Phe Lys Trp Pro Trp Ser Pro
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Val Ser Leu Ala Met Trp Gln Lys'Gln Thr Ile Leu Phe Gly Gly Tyr
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            20
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Asp Ala Val Ile Ser Val Ser Gln Gly Leu Cys Asp Arg Leu Ala Gly
        35
                            40
                                                45
His Gly Val Thr Ser Thr Val Val Pro Asn Ile Val Asp Val Glu Leu
    50
                        55
                                             60
Phe Asp Arg Pro Asp Arg Arg His Glu Gly Thr Ile Val Val Ser Val
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                                        75
Ala Thr Leu Asn Pro Gly Lys Gly Met Ile Glu Leu Ala Gln Ala Val
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Glu Arg Leu Pro Glu Val Gln Leu Arg Ile Ile Gly Asp Gly Pro Gln
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Ile Ala Ala Phe Phe Thr Pro Thr Gly Tyr Gly Thr Ala Val Gln Lys
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Gly Glu Leu Val Leu Lys Tyr Glu Lys Lys Asp Gly Lys Ala Val Pro
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                               25
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Arg Glu Ser Arg Gly Cys Val Thr Pro Leu Phe Phe Pro Pro Gln His
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Arg Thr Gly Gly Pro Trp Leu Arg Ile Arg Thr Pro Phe Ala Pro Ala
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Cys Ala Cys Ser Ser Ala Pro Gly Ala Arg Met Arg Met Tyr Arg Arg
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His Lys Ala Arg Arg Arg
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Ser Met Phe Met Val Cys Val Ala Leu Gly Ala Thr Asp Leu Leu Phe
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Ala Leu Asp Ser Ile Pro Ala Ser Tyr Gly Phe Thr Asn Glu Gly Tyr
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Leu Ile Leu Thr Ala Asn Val Phe Ala Leu Met Gly Leu Arg Gln Leu
                    70
                                        75
Tyr Phe Leu Ile Gly Ser Leu Leu Glu Arg Leu Val Tyr Leu Ser Leu
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                                    90
Gly Leu Val Val Ile Leu Gly Phe Ile Ala Leu Lys Leu Ile Gly His
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240
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Thr Pro Val Ile Asn Gly Gln Ser Leu Thr Lys Gly Glu Thr Cys Met
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Asn Pro Gln Asp Phe Lys Pro Gly Ala Met Val Leu Glu Gln Asn Gly
Lys Ser Gly His Thr Leu Thr Gly Asp Gly Leu Asn Gly Pro Ser Asp
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Ala Ser Glu Gln Arg Val Ser Met Ala Ser Ser Gly Ser Ser Gln Pro
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Glu Leu Val Thr Ile Pro Leu Ile Lys Gly Pro Lys Gly Phe Gly Phe
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                                                   110
                               105
Ala Ile Ala Asp Ser Pro Thr Gly Gln Lys Val Lys Met Ile Leu Asp
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                                                125
Ser Gln Trp Cys Gln Gly Leu Gln Lys Gly Asp Ile Ile Lys Glu Ile
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Tyr His Gln Asn Val Gln Asn Leu Thr His Leu Gln Val Val Glu Val
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Leu Lys Gln Phe Pro Val Gly Ala Asp Val Pro Leu Leu Ile Leu Arg
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               165
Gly Gly Pro Pro Ser Pro Thr Lys Ser Ala Lys Met Lys Thr Asp Lys
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Lys Glu Asn Ala Gly Ser Leu Glu Ala Ile Asn Glu Pro Ile Pro Gln
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Pro Met Pro Phe Pro Pro Ser Ile Ile Arg Ser Gly Ser
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920

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Leu Val Arg Ser Ser Gly Asp Ile Gln Glu Gly Asp Leu Val Glu Val
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Val Leu Ser Ala Ser Ala Thr Phe Glu Asp Phe Gln Ile Arg Pro His
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Ala Leu Thr Val His Ser Tyr Arg Ala Pro Ala Phe Cys Asp His Cys
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Gly Glu Met Leu Phe Gly Leu Val Arg Gln Gly Leu Lys Cys Asp Gly
Cys Gly Leu Asn Tyr His Lys Arg Cys Ala Phe Ser Ile Pro Asn Asn
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                                105
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Cys Ser Gly Ala Arg Lys Arg Arg Leu Ser Ser Thr Ser Leu Ala Ser
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Gly His Ser Val Arg Leu Gly Thr Ser Glu Ser Leu Pro Cys Thr Ala
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Glu Glu Glu Pro
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Tyr Leu Ala Lys Met Gly Pro Pro Glu Glu Asp Phe Ile Ser Asn Ala
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Pro Thr Leu Leu Asn Glu Met Ala Val Val Asp Gly Glu Val Lys Lys
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Gly Ser Leu Ala Arg Val Glu Pro Glu Gly His Val Met Arg Met Trp
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Glu Ala
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240
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300
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Arg Phe Ser Gln Ala Gly Ser Glu Val Ser Thr Leu Leu Gly Arg Met
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                                                45
Pro Ser Ala Val Gly Tyr Gln Pro Asn Leu Ala Asp Glu Met Gly Gln
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Leu Gln Glu Arg Ile Thr Ser Thr Arg Gly His Ser Ile Thr Ser Met
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Gln Ala Val Tyr Val Pro Ala Asp Asp Tyr Thr Asp Pro Ala Pro Ala
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Thr Thr Phe Ala His Leu Asp Ala Thr Thr Glu Leu Ser Arg Glu Ile
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Ala Ser Arg Gly Leu Tyr Pro Ala Val Asp Pro Leu Ala Ser
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571
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Arg Ile Thr Leu Glu His Ala Arg Gln Arg Lys Asn Val Glu Glu
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Asp Ile Phe Ala Ala His Leu Ala Leu Leu Glu Asp Pro Thr Leu Leu
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Asp Ala Ala Thr Gly Ala Ile Glu His Gly Ser Ala Ala Thr His Ala
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Trp Arg Asp Ala Ile Gln Ala Gln Cys Ala Val Leu Leu Ala Leu Gly
                85
                                    90
Lys Pro Leu Phe Ala Glu Arg Ala Asn Asp Leu Arg Asp Leu Gln Gln
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                               105
                                                   110
Arg Val Leu Arg Ala Leu Leu Gly Glu Ala Trp His Phe Glu Leu Pro
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                          120
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Ala Gly Pro Ile Phe Arg Xaa Ala Ile Asn Leu Pro Pro Ser Ala Leu
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                                           140
Leu Gln Leu Ser Ala Gln Asn Ala Val Gly Ile Cys Met Ala Glu Gly
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Gly Ala Thr Ser His Val Ala Ile Leu Ala Arg Gly Lys Gly Leu Pro
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Cys Val Val Ala Leu Gly Ala Glu Val Leu Asp Val Pro Gln
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480
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Val Met Cys Thr Cys Ala Leu Cys Val Val Cys Met His Gly Val Cys
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                                                 45
Thr Cys Ala Leu Cys Val Cys Val Cys Met Cys Val His Val Cys Leu
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Cys Val Cys Met Val Met Cys Val Cys Thr Val Trp Cys Val Cys Met
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Cys Val His Val Cys Thr Val Tyr Ala
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Gly Val Leu Phe Arg Ser Phe Gln Gln Gln Thr Gly His Gly Asp Pro
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Arg Ala Ala Cys Leu Arg Lys Gly Glu Leu Phe Glu Asp Pro Leu Phe
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Asn	Pro	Leu	Phe	Ile 85	Met	Asp	Gly	Ile	Ser 90	Pro	Thr	Asp	Ile	Cys 95	Gln
Gly	Ile	Leu	Gly 100	Asp	Cys	Trp	Leu	Leu 105	Ala	Ala	Ile	Gly	Ser 110	Leu	Thr
Thr	Cys	Pro 115	Lys	Leu	Leu	Tyr	Arg 120	Val	Val	Pro	Arg	Gly 125	Gln	Ser	Phe
Lys	Lys 130	Asn	Tyr	Ala	Gly	Ile 135	Phe	His	Phe	Gln	Ile 140	Ťrp	Gln	Phe	Gly
Gln 145	Trp	Val	Asn	Val	Val 150	Val	Asp	Asp	Arg	Leu 155	Pro	Thr	Lys	Asn	Asp 160
Lys	Leu	Val	Phe	Val 165	His	Ser	Thr	Glu	Arg 170	Ser	Glu	Phe	Trp	Ser 175	Ala
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Ser	Gly	Gly 195	Ser	Thr	Met	Glu	Gly 200	Leu	Glu	Asp	Phe	Thr 205	Gly	Gly	Val
Ala	Gln 210	Ser	Phe	Gln	Leu	Gln 215	Arg	Pro	Pro	Gln	Asn 220	Leu	Leu	Arg	Leu
225	_	-			230	_				Met 235	_	_			240
				245					250	Thr				255	
			260					265		Gln			270		
_	-	275					280		_	Asn		285			
	290					295				Arg	300			_	_
305		•			310					Lys 315			_	_	320
	_			325		_			330	Asn				335	
			340					345		Gly			350		
_		355			_		360		_	Arg	_	365			
-	370	•	_			375	-			Trp	380				
385					390	-	-	_		Glu 395	_	_			400
				405					410	Leu				415	
			420					425		Gln			430		
		435					440			Ile		445			
Lys	Lys 450	Glu	Phe	Phe	Thr	Lys 455	Tyr	Gln	Asp	His	Gly 460	Phe	Ser	Glu	Ile
Phe	Thr	Asn	ser	Arg	Glu	Val	Ser	Ser	Gln	Leu	Arg	Leu	Pro	Pro	Gly

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Glu Tyr Ile Ile Ile Pro Ser Thr Phe Glu Pro His Arg Asp Ala Asp
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Asp Glu Val Asn Tyr Ala Glu Gln Leu Gln Glu Glu Lys Val Ser Glu
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Asp Asp Met Asp Gln Asp Phe Leu His Leu Phe Lys Ile Val Ala Gly
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Glu Gly Lys Glu Ile Gly Val Tyr Glu Leu Gln Arg Leu Leu Asn Arg
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Met Ala Ile Lys Phe Lys Ser Phe Lys Thr Lys Gly Phe Gly Leu Asp
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Ala Cys Arg Cys Met Ile Asn Leu Met Asp Lys Asp Gly Ser Gly Lys
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Leu Gly Leu Leu Glu Phe Lys Ile Leu Trp Lys Lys Leu Lys Lys Trp
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Met Asp Ile Phe Arg Glu Cys Asp Gln Asp His Ser Gly Thr Leu Asn
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Ser Tyr Glu Met Arg Leu Val Ile Glu Lys Ala Gly Ile Lys Leu Asn
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Asn Lys Val Met Gln Val Leu Val Ala Arg Tyr Ala Asp Asp Gly Leu
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Ile Ile Asp Phe Asp Ser Phe Ile Ser Cys Phe Leu Arg Leu Lys Thr
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Gly Glu Asp Val Lys Ile Arg Glu Trp Leu His Lys Asn Leu Glu Arg
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Ala Gly Leu Ser Ser Ile Glu Ile Glu Arg Arg Ser Glu Arg Val Thr
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Ile Phe Leu Tyr Ala Ala Arg Pro Gly Ile Val Ile Gly Arg Asn Gly
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Arg Glu Ala Glu Arg Val Arg Xaa Glu Leu Glu Lys Leu
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                                                    30
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Pro Asp Gln Leu Val Ser Ala Ile Gln Gln Val Lys Asp Asp Gly Lys
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Phe Val Ala Leu Val Asp Arg Ala Pro Ser Val Asn Asp Asn Thr Ile
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Gly Leu Ser Val Thr Pro Lys Gly Leu Ala Pro Phe Cys Cys Arg Ala
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Phe Ala Pro Ala Val Ser Phe Thr Arg Asn Ile Tyr Pro Val Pro Leu
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Ala Val Ser Ser Ser Val Asp Pro Ser Val Leu Arg Gly Leu Pro Gln
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Ala Ser Thr Asp Pro Ala Asp Asp Glu Leu Lys Asp Leu Leu Thr Ala
                                                     30
            20
Asp Leu Met Asp Gln His Asn Leu Asp Arg Ala Leu Ala Gly Leu Arg
                            40
Ala Ser His Val Ile Asp Glu Ala Arg Ala Glu Val Gln Arg Arg Ala
Asp Leu Ala Arg Gly His Leu Ala Ile Leu Pro Ala Gly Asp Ala Arg
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Thr Ala Leu Glu Thr Leu Cys Asp Glu Val Gly Ser Arg Ala Ala
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acatggcggg ggatcgaggt tggtggctat gaaatccatc acgggcgtct gtcgttcgct
gaggacgetg aagcetteet egacggegta eaegteggte eggtatgggg gacgatgtgg
cacggggcat tcgagcacga cgaattccgt cgcacgtggc tggctgacgc ggcccgtcac
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atgategaaa ceetegeega egegt
385
<210> 940
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<213> Homo sapiens
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Lys Thr Leu Ala Leu Ser His Gly Thr Trp Arg Gly Ile Glu Val Gly
Gly Tyr Glu Ile His His Gly Arg Leu Ser Phe Ala Glu Asp Ala Glu
                       55
Ala Phe Leu Asp Gly Val His Val Gly Pro Val Trp Gly Thr Met Trp
                   70
                                      75
His Gly Ala Phe Glu His Asp Glu Phe Arg Arg Thr Trp Leu Ala Asp
                                   90
              85
Ala Ala Arg His Ala Gly Ser Ser Trp Arg Pro His Ser Asp Glu Leu
                             105
                                                   110
           100
Gly Tyr Gln Ala Arg Arg Glu Ala Met Ile Glu Thr Leu Ala Asp Ala
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<211> 348
<212> DNA
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<211> 116
<212> PRT
<213> Homo sapiens
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                               25
Pro Phe Ser Val Val Leu Ile Phe Phe Met Phe Gly Leu His Lys Ala
                           40
Met Arg Gln Asp Val Ala Met Glu Gln Glu Gln Ala Gln Leu Ala Glu
Arg Gly Arg Arg Gly Phe Ser Glu Arg Leu Thr Ala Leu Asp Leu Gln
Pro Ser Gln Gly Thr Val Gln Arg Phe Met Asp Lys His Val Thr Pro
                                  90
               85
Ala Leu Glu Gln Ala Ala Thr Ala Leu Arg Asp Gln Gly Leu Glu Val
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Gln Thr Leu Leu
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<213> Homo sapiens
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ttgccctctt ctgtgatcac atcctcactt ctgagcctat ctgcccatcc agtcaatccc
ccttggttct gggatgctat ttccctggcc gcctccctct aggagtgttt agaaccctca
ctgtgggcag aagggaggga agatggctga ggtacctgga aagggacgtg tggatccccg
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gaacctggct tagtgctggc ccttcacata ctgagacatg gaatccttac tactgttctc
tgaggaaaga ggctgttcc
439
<210> 944
<211> 118
<212> PRT
<213> Homo sapiens
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Met Ala Gly Ala Glu Gln Ile Glu Gln Asp Leu Val Ser Phe Ser Leu
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His Phe Val Pro Pro Leu Met His Pro Gly Leu Leu Leu Thr Leu Trp
                               25
           20
Glu Thr Pro Ser Leu Leu Ser Phe Ala Leu Phe Cys Asp His Ile Leu
                                               45
                           40
Thr Ser Glu Pro Ile Cys Pro Ser Ser Gln Ser Pro Leu Val Leu Gly
                       55
  50
Cys Tyr Phe Pro Gly Arg Leu Pro Leu Gly Val Phe Arg Thr Leu Thr
                    70
                                        75
Val Gly Arg Arg Glu Gly Arg Trp Leu Arg Tyr Leu Glu Arg Asp Val
                                   90
               85
Trp Ile Pro Gly His Gly Arg Lys Glu Ala Gly Glu Leu Glu Lys Gly
                               105
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Met Arg Ser Asn Val Pro
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tatatatata gcgtgtacaa caaaacatgc actgtttact cagcaccccg tgtttgtctc
agcaataget tttetaaaga aetgetaeta tttgaaatgg agggggaggg gggteetgga
240
cagagtattg tgcaagttga aagtototgg atggggctat gtatatoota ccagocaatt
tgggtgcaaa ttggatttga aggcctgcct ctgtccacn
339
<210> 946
<211> 113
<212> PRT
<213> Homo sapiens
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Ala Leu Tyr Val Glu Met Val Ile Tyr Ile Tyr Thr His Thr His Ile
                                                    30
                                25
           20
Tyr Val Cys Val Cys Ile Tyr Val Tyr Ile Tyr Ser Val Tyr Asn Lys
                            40
                                                45
Thr Cys Thr Val Tyr Ser Ala Pro Arg Val Cys Leu Ser Asn Ser Phe
                        55
                                            60
   50
Ser Lys Glu Leu Leu Phe Glu Met Glu Gly Glu Gly Pro Gly
                    70
                                        75
Gln Ser Ile Val Gln Val Glu Ser Leu Trp Met Gly Leu Cys Ile Ser
                                    90
Tyr Gln Pro Ile Trp Val Gln Ile Gly Phe Glu Gly Leu Pro Leu Ser
           100
                                105
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<210> 947
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<212> DNA
<213> Homo sapiens
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ctcgtggcat cacacctgtg cacgggggtg gggaaggagt ggacaggagt ggacaagtca
agtagtgctg ccggctcaag cgatgcctca gcctttctgc tgtgtgcgaa gctttgcaga
180
ggagatgatg cttcaaagtt gtccctgttg gggatgagca gccaggcctt tatacactgg
gacagtcagt catggatacg tggatactct ggaaaccctc atccctggag gtctgagccc
300
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ctqqatacca tgcccttctt aggctggagt tgctgccctt gtccatttac cataaaaatt
ggacaagaga ataccaggac acacctgagt ttctcatcgt atgctaaacc tgttcttcca
cqtacatccc caatgtgtac agccctactt ttttctgctg atcaagttca attacttctg
ctaagatggt gactattctt gcctgctggt ccttggatgc aaggacccca atgttcaggc
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<210> 948
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Leu Cys Thr Gly Val Gly Lys Glu Trp Thr Gly Val Asp Lys Ser Ser
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           20
                                25
Ser Ala Ala Gly Ser Ser Asp Ala Ser Ala Phe Leu Leu Cys Ala Lys
        35
                            40
                                                45
Leu Cys Arg Gly Asp Asp Ala Ser Lys Leu Ser Leu Leu Gly Met Ser
                        55
    50
Ser Gln Ala Phe Ile His Trp Asp Ser Gln Ser Trp Ile Arg Gly Tyr
                                        75
                    70
Ser Gly Asn Pro His Pro Trp Arg Ser Glu Pro Leu Asp Thr Met Pro
                                    90
Phe Leu Gly Trp Ser Cys Cys Pro Cys Pro Phe Thr Ile Lys Ile Gly
                                                    110
           100
                                105
Gln Glu Asn Thr Arg Thr His Leu Ser Phe Ser Ser Tyr Ala Lys Pro
                            120
                                                125
Val Leu Pro Arg Thr Ser Pro Met Cys Thr Ala Leu Leu Phe Ser Ala
                                            140
                        135
   130
Asp Gln Val Gln Leu Leu Leu Leu Arg Trp
145
                    150
<210> 949
<211> 661
<212> DNA
<213> Homo sapiens
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aagtaatgtg gaattttatc acagtggtca agaaggcttc agggatagca cagatccaag
atatgetgta aegtttetta aeetaggaca gatteaagaa eatggeteat ettatatteg
aggetgtget titeaceatg gettetetee ageaattggt gtatttggga cagatggatt
240
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ggacatagat gacaacatca ttcactttac agtgggggaa ggcataagaa tatgggggaa
tgccaaccga gtccgaggga atttgattgc actttcggtt tggccaggaa cctatcagaa
cagaaaagat ttaagttcaa ctctctggca tgcagcaatt gagataaata gagggaccaa
tacagtttta cagaataatg tagtggctgg atttggaaga gcaggatacc gcattgatgg
tgaaccttgc ccaggccagt ttaatcctgt ggaaaagtgg tttgacaatg aagcccatgg
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<210> 950
<211> 210
<212> PRT
<213> Homo sapiens
<400> 950
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His Ser Gly Gln Glu Gly Phe Arg Asp Ser Thr Asp Pro Arg Tyr Ala
            20
                                25
                                                    30
Val Thr Phe Leu Asn Leu Gly Gln Ile Gln Glu His Gly Ser Ser Tyr
                                                45
                           40
       35
Ile Arg Gly Cys Ala Phe His His Gly Phe Ser Pro Ala Ile Gly Val
                       55
                                            60
Phe Gly Thr Asp Gly Leu Asp Ile Asp Asp Asn Ile Ile His Phe Thr
                   70
Val Gly Glu Gly Ile Arg Ile Trp Gly Asn Ala Asn Arg Val Arg Gly
                85
                                   90
Asn Leu Ile Ala Leu Ser Val Trp Pro Gly Thr Tyr Gln Asn Arg Lys
           100
                               105
                                                   110
Asp Leu Ser Ser Thr Leu Trp His Ala Ala Ile Glu Ile Asn Arg Gly
                                                125
                           120
       115
Thr Asn Thr Val Leu Gln Asn Asn Val Val Ala Gly Phe Gly Arg Ala
                        135
                                            140
   130
Gly Tyr Arg Ile Asp Gly Glu Pro Cys Pro Gly Gln Phe Asn Pro Val
                                       155
145
                   150
Glu Lys Trp Phe Asp Asn Glu Ala His Gly Gly Leu Tyr Gly Ile Tyr
               165
                                   170
                                                       175
Met Asn Gln Asp Gly Leu Pro Gly Cys Ser Leu Ile Gln Gly Phe Thr
           180
                               185
Ile Trp Thr Cys Trp Asp Tyr Gly Ile Tyr Phe Gln Thr Thr Glu Ser
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       195
                           200
Val His
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<210> 951
<211> 2615
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1920
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2340
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<212> PRT
<213> Homo sapiens
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Ser Gly Ala Gln Thr Thr Arg Pro Cys Phe Pro Gly Cys Gln Cys Glu
Val Glu Thr Phe Gly Leu Phe Asp Ser Phe Ser Leu Thr Arg Val Asp
                            40
Cys Ser Gly Leu Gly Pro His Ile Met Pro Val Pro Ile Pro Leu Asp
   50
                        55
                                            60
Thr Ala His Leu Asp Leu Ser Ser Asn Arg Leu Glu Met Val Asn Glu
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70
Ser Val Leu Ala Gly Pro Gly Tyr Thr Thr Leu Ala Gly Leu Asp Leu
                               90
Ser His Asn Leu Leu Thr Ser Ile Ser Pro Thr Ala Phe Ser Arg Leu
                                              110
                           105
         100
Arg Tyr Leu Glu Ser Leu Asp Leu Ser His Asn Gly Leu Thr Ala Leu
      115
                        120
                                           125
Pro Ala Glu Ser Phe Thr Ser Ser Pro Leu Ser Asp Val Asn Leu Ser
           135
                              140
His Asn Gln Leu Arg Glu Val Ser Val Ser Ala Phe Thr Thr His Ser
                          155
        150
Gln Gly Arg Ala Leu His Val Asp Leu Ser His Asn Leu Ser Pro Pro
           165
                     170
Arg Ala Pro Pro His Glu Gly Arg Pro Ala Cys Ala His His Ser Glu
         180
                           185
                                               190
Pro Glu Pro Gly Leu Glu Pro Ala Pro Cys Arg Ala Gln Pro Arg Asp
                       200
                                           205
Leu Pro Leu Arg Tyr Leu Ser Leu Asp Gly Asn Pro Leu Ala Val Ile
                                        220
                    215
Gly Pro Gly Ala Phe Ala Gly Leu Gly Gly Leu Thr His Leu Ser Leu
                230
                                    235
Ala Ser Leu Gln Arg Leu Pro Glu Leu Ala Pro Ser Gly Phe Arg Glu
                               250
             245
Leu Pro Gly Leu Gln Val Leu Asp Leu Ser Gly Asn Pro Lys Leu Asn
                   265
          260
Trp Ala Gly Ala Glu Val Phe Ser Gly Leu Ser Ser Leu Gln Glu Leu
                                 285
                280
Asp Leu Ser Gly Thr Asn Leu Val Pro Leu Pro Glu Ala Leu Leu
           295
His Leu Pro Ala Leu Gln Ser Val Ser Val Gly Gln Asp Val Arg Cys
               310
                                 315
Arg Arg Leu Val Arg Glu Gly Thr Tyr Pro Arg Arg Pro Gly Ser Ser
                              330
             325
Pro Lys Val Ala Leu His Cys Val Asp Thr Arg Glu Ser Ala Ala Arg
                            345
         340
Gly Pro Thr Ile Leu
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<211> 347
<212> DNA
<213> Homo sapiens
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aagccattgc gtttcaccct ttcatggccc ttcctttccc cttccaagtg agctctttga
ggtgagtcat ggagggcagt gtccctctgc atcctgtctg gggttgtcaa atatggccaa
300
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347
<210> 954
<211> 103
<212> PRT
<213> Homo sapiens
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Asp Thr Ala Leu His Asp Ser Pro Gln Arg Ala His Leu Glu Gly Glu
                                25
            20
Arg Lys Gly His Glu Arg Val Lys Arg Asn Gly Phe Ser Leu Pro Ser
        35
                            40
Tyr Cys Val Ser Ala Ala Val Thr Pro Gln Ser Arg Gln Val Gln Gln
                        55
   50
Ser Arg His Gly Lys Thr Ser Thr Pro Asn Asp Gly Ser Arg Asp Gly
                    70
                                        75
Glu Ser Val Val His Thr Leu Arg Gly Asp Pro Arg Glu Thr Gly Leu
                85
                                    90
Arg Thr Gly Met Ala Ser Arg
            100
<210> 955
<211> 634
<212> DNA
<213> Homo sapiens
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420
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caccatetea cacetggaac aagggttacg geeg
634
<210> 956
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941

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<211> 113
<212> PRT
<213> Homo sapiens
<400> 956
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Gly Arg Leu Gly Arg Ser Phe Leu Leu Ser Ala Asp Asn Arg Glu Glu
His Ser Val Val Ala Ser Gln Val Cys Thr Asn Ala Ala Cys Glu Pro
                            40
Val Thr Glu Ala Leu Thr Cys Arg Ala Ala His Leu Gln Ser Arg Ser
                                            60
Pro Ala Glu Pro Phe Thr Cys Arg Ala Leu His Leu Gln Asn Arg Ser
                    70
                                        75
Pro Ala Glu Pro Phe Thr Cys Arg Thr Ile His Leu Gln Ser Arg Ser
                                    90
Pro Ala Glu Pro Phe Thr Cys Arg Ala Ala His Leu Gln Ser Pro Ser
            100
                                105
                                                    110
Arg
<210> 957
<211> 823
<212> DNA
<213> Homo sapiens
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120
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420
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660
tgtaccatac atcactatgt cttcccaagc tcacacctcc cagctcccag caaagggcag
ggcgtgtcta ccacccacca gcccactggg gtcccccttc ctcgccgagg cctccggagc
780
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823
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<211> 105
<212> PRT
<213> Homo sapiens
<400> 958
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Val Ser Gln Val Pro Thr Gly Thr Ser Pro Leu Gln Ala Phe Trp Asp
                                                    30
                                25
            20
Pro His Trp Leu Arg Trp Ala Leu His Ser Thr Pro Thr Gly Lys Leu
                            40
Leu Phe Leu Pro Ser Ser Lys Val Pro Lys Leu Pro Gly Cys Ser Val
                        55
   50
Gly Pro Arg Leu Gln His Thr Leu Glu Ala Ala Pro His Pro Val Ser
                                        75
                    70
Trp Phe Arg Leu Leu Gln Ala Leu Ser Ser Ala Gly His Pro Leu Leu
                85
Pro Val Ser Arg Pro Leu Gly Thr Ala
            100
<210> 959
<211> 586
<212> DNA
<213> Homo sapiens
<400> 959
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502

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            20
                                25
Lys Ser His Ser Glu Lys Ala His Gly His Gly Ala Ser Arg Lys Glu
                                                45
        35
                            40
Thr Pro Gln Phe Phe Pro Ser Ser Pro Pro Pro His Ser Pro Ile Ser
                        55
    50
His Gly His Ile Pro Ser Ala Ile Val Leu Pro Asn Ala Thr His Asp
                    70
                                        75
Tyr Asn Thr Ser Phe Ser Asn Ser Asn Ala His Lys Ala Glu Lys Lys
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Leu Gln Asn Ile Asp His Pro Phe Thr Arg
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acgccaccca gggccagtcg ggtctgctca cagcccgagg aggccgcgtg tccagccgcg
qqcaaqaqac agagcaggtc cctgtgtatc caagtccctg agcccgtgac accggcccca
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360
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420
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caggeegeeg tggetaegge egeetgegge egegegeeeg gteacteage aaagegteea
660
cggccatcaa ctggctcaca aaaaagttcc tcctcaagaa ggccgaggag tcgggcagcg
aacaggccac agtggacgcc tggctgcagc gctcgagctc ccgcatgggc tcccgcaaac
780
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900
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1200
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Gly His Ser Ala Lys Arg Pro Arg Pro Ser Thr Gly Ser Gln Lys Ser
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Ser Ser Ser Arg Arg Pro Arg Ser Arg Ala Ala Asn Arg Pro Gln Trp
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                            40
       35
Thr Pro Gly Cys Ser Ala Arg Ala Pro Ala Trp Ala Pro Ala Asn Ser
                       55
                                           60
Pro Ser Arg Arg Val Pro Arg Ser Cys Gly Leu Gly Ala Gly Ser Gly
                                        75
Gly Ser Pro Ala Ala Ala Ser Thr Arg Gln Ala Ser Pro Trp Ala
                                   90
               85
Ser Cys Pro Ser Arg Thr Arg Pro His Ser Ile Thr Arg Ala Pro Ala
                                                   110
           100
                               105
Ser Arg Cys Thr Gly Leu Arg Ala Ser Arg Thr Trp Ala Ser Ile Met
                            120
                                                125
       115
Thr Ile Thr Ala Thr Ala Thr Thr Thr Thr Gly Ser His Ser Thr
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                                           140
Ala Thr Arg Ser Arg Asn Pro Thr Trp Arg Ala Ser Ala Pro Thr Ala
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                   150
Arg Pro Gly His Pro Thr Ala Thr Thr Thr Gly Thr Arg Pro Arg
                                                       175
                                   170
               165
Ile Pro Thr Thr Thr Thr Pro Thr Ile Thr Val Ala Pro Leu Ile
                                                    190
           180
                                185
Arg Gly Thr Pro Thr Ala Thr Ala Thr Thr Ile Thr Asn Pro His Met
                           200
                                                205
        195
Arg Pro Arg Arg Gly Thr Arg Leu Leu Thr Ala Thr Thr Met Gly Thr
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                                           220
Arg Ala Arg Arg Thr Leu Met Ala Thr Thr Trp
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aataccggcg gtgagagctt tggcattgtc ttggtggaag ccatggcggc aggcgcagcc
gttgttgctt cagacttgga ggccttccgc gcagtgtgca acgccgattc cgatgatgtt
240
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ctcgaggatc ctgagtatcg tgcccgctta gtgcac
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                                25
Arg Ala Asp Val Tyr Val Ala Pro Asn Thr Gly Gly Glu Ser Phe Gly
                            40
                                                45
Ile Val Leu Val Glu Ala Met Ala Ala Gly Ala Ala Val Val Ala Ser
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Asp Leu Glu Ala Phe Arg Ala Val Cys Asn Ala Asp Ser Asp Asp Val
                    70
                                        75
Ala Gly Ala Leu Tyr Arg Asn Glu Asp Ser Asn Asp Leu Ala Arg Val
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Leu Asn Glu Val Leu Glu Asp Pro Glu Tyr Arg Ala Arg Leu Val His
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ggcgcggagg cgtcgggctc aagctccgct tcggcaccgg tcggcactga ggaatctccg
toggoctocg ottoggoogo agootgggot gegocagaet otgogggagg cacottotoc
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ggegettegg eeggageget eaeggaetee ggeactacag gtgeagettg egetteetge
ggcggagcaa cagggtcact tcgaggcggg gat
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Ala Gly Gly Thr Phe Ser Arg Val Arg Gln Pro Asn Gly Val Ala Gly
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                                            60
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Ser Ser Ile Gln Ser Gly Ala Phe Gly Thr Pro Ala Leu Arg Arg Glu
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                                        75
Ala Ala Arg Asn Asp Gly Thr Gly Gly Ala Gly Gly Asp Thr Gly Ala
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Ser Ala Gly Ala Leu Thr Asp Ser Gly Thr Thr Gly Ala Ala Cys Ala
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Ser Cys Gly Gly Ala Thr Gly Ser Leu Arg Gly Gly Asp
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aagaatetta eeetgeegte tttagtatgt gaagtactgg acetgatggt agagtttatt
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Leu Thr Leu Pro Ser Leu Val Cys Glu Val Leu Asp Leu Met Val Glu
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       35
                          40
Phe Ile Val Thr His Met Met Lys Glu Phe Pro Met Asp Leu Tyr Ile
                       55
                                          60
Arg Cys Ile Gln Val Val His Lys Leu Leu Cys Tyr Gln Lys Lys Cys
                                       75
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Arg Val Arg Leu His Tyr Thr Trp Arg Glu Leu Trp Ser Ala Leu Ile
               85
                                  90
Asn Leu Leu Lys Phe Leu Met Ser Asn Glu Thr Val Leu Leu Ala Lys
                               105
           100
His Asn Ile Phe Thr Leu Ala Leu Met Ile Val Asn Leu Phe Asn Met
                                              125
                          120
       115
Phe Ile Thr Tyr Gly Asp Thr Phe Leu Pro Thr Pro Ser Ser Tyr Asp
                      135
                                          140
Glu Leu Tyr Tyr Glu Ile Ile Arg Met His Gln Ser Phe Asp Asn Leu
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Tyr Ser Met Val Leu Arg Leu Ser Thr Asn Ala Gly Gln Trp Lys Glu
                                   170
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Ala Ala Ser Lys Val Thr His Ala Leu Val Asn Ile Arg Ala Ile Ile
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Asn His Phe Asn Pro Lys Ile Glu Ser Tyr Ala Ala Val Asn His Ile
                                              205
                          200
Ser Gln Leu Ser Glu Glu Gln Val Leu Glu Val Val Arg Ala Asn Tyr
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                                           220
Asp Thr Leu Thr Leu Lys Leu Gln Asp Gly Leu Asp Gln Tyr Glu Arg
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Tyr Ser Glu Gln His Lys Glu Ala Ala Phe Phe Lys Glu Leu Val Arg
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Ser Ile Ser Thr Asn Val Arg
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180

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            20
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Thr Gly Ser Thr Glu Ser Gly Thr Gln Gly Phe Gln His Ile Leu Arg
       35
Gly Asp Ser Ser Gly Cys Val Thr Leu Arg Thr Thr Gly Lys Val Ala
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Leu Gly Ser Glu Ile Arg Val His Ile Leu Gly Leu Pro Leu Thr Asp
Cys Asn Gly Gly Gln Val Thr Cys Arg Ala Gln
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660
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Arg Arg Asn Glu Pro Thr Leu Pro Arg Glu Phe Thr Arg Arg Gly Arg
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Arg Gly Ala Val Ser Val Asp Ser Leu Ala Glu Leu Glu Asp Gly Ala
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Leu Leu Gln Thr Leu Gln Leu Ser Lys Ile Ser Phe Pro Ile Gly
                                      75
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Gln Arg Leu Leu Gly Ser Lys Arg Lys Met Ser Leu Asn Pro Ile Ala
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                                  90
Lys Gln Ile Pro Gln Val Val Glu Ala Cys Cys Gln Phe Ile Glu Lys
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          100
His Gly Leu Ser Ala Val Gly Ile Phe Thr Leu Glu Tyr Ser Val Gln
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Arg Val Arg Gln Leu Arg Glu Glu Phe Asp Gln Gly Leu Asp Val Val
                                          140
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Leu Asp Asp Asn Gln Asn Val His Asp Val Ala Ala Leu Leu Lys Glu
                                     155
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Phe Phe Arg Asp Met Lys Asp Ser Leu Leu Pro Asp Asp Leu Tyr Met
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                                                  175
Ser Phe Leu Leu Thr Ala Thr Leu Lys Pro Gln Asp Gln Leu Ser Ala
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Leu Gln Leu Leu Val Tyr Leu Thr Pro Pro Cys His Ser Asp Thr Leu
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Glu Arg Leu Leu Lys Ala Leu His Lys Ile Thr Glu Asn Cys Glu Asp
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                                          220
Ser Ile Gly Ile Asp Gly Gln Leu Val Pro Gly Asn Arg Met Thr Ser
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Thr Asn Leu Ala Leu Val Phe Gly Ser Ala Leu Leu Lys Lys Gly Lys
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Phe Gly Lys Arg Glu Ser Arg Lys Thr Lys Leu Gly Ile Asp His Tyr
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Val Ala Ser Val Asn Val Val Arg Ala Met Ile Asp Asn Trp Asp Val
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Leu Phe Gln Val Pro Pro His Ile Gln Arg Gln Val Ala Lys Arg Val
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Trp Lys Ser Ser Pro Glu Ala Leu Asp Phe Ile Arg Arg Asn Leu
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Arg Lys Ile Gln Ser Ala Arg Ile Lys Met Glu Glu Asp Ala Leu Leu
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Ser Asp Pro Val Glu Thr Ser Ala Glu Ala Arg Ala Ala Val Leu Ala
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           340
                               345
Gln Ser Lys Pro Ser Asp Glu Gly Ser Ser Glu Glu Pro Ala Val Pro
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Ser Gly Thr Ala Arg Ser His Asp Asp Glu Glu Gly Ala Gly Asn Pro
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Pro Ile Pro Glu Gln Asp Arg Pro Leu Leu Arg Val Pro Arg Glu Lys
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Буз	Leu	Gru	580	Бец	Азр	11.5	****	585	U			204	590		
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Thr Leu Leu Gln Lys Met Ser Ser Phe
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<210> 989
<211> 402
<212> DNA
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<400> 989
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ttgatcgage agectgacet getgettete gatgagecca ecaaccacet ggatgetgag
totgtoaact ggttggaggg acaceteaag teetateegg gagetgtget ageegteact
cacqueeget atttecttga teaegtegee gagtggatet gtgaggtega tegeggeeag
300
ttgcaccct acgaggcaa ctactcgacg tacctggaca ccaagcgcaa gcgtctccag
atcgaaggca agaaagacgc taaacgcgcc aagatcctcg ag
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<210> 990
<211> 134
<212> PRT
<213> Homo sapiens
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Ala Trp Asp Ile Asp Thr Arg Leu Glu Gln Ala Met Asp Ala Leu Gln
                                   10
                5
Cys Pro Pro Gly Asp Thr Pro Val Asp Val Leu Ser Gly Gly Glu Arg
                                25
                                                    30
           20
Arg Arg Val Ala Leu Cys Lys Leu Leu Ile Glu Gln Pro Asp Leu Leu
                                                45
                           40
Leu Leu Asp Glu Pro Thr Asn His Leu Asp Ala Glu Ser Val Asn Trp
                        55
                                            60
Leu Glu Gly His Leu Lys Ser Tyr Pro Gly Ala Val Leu Ala Val Thr
                   70
His Asp Arg Tyr Phe Leu Asp His Val Ala Glu Trp Ile Cys Glu Val
                                    90
Asp Arg Gly Gln Leu His Pro Tyr Glu Gly Asn Tyr Ser Thr Tyr Leu
                                                   110
           100
                               105
Asp Thr Lys Arg Lys Arg Leu Gln Ile Glu Gly Lys Lys Asp Ala Lys
                                              125
       115
                           120
Arg Ala Lys Ile Leu Glu
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130
<210> 991
<211> 359
<212> DNA
<213> Homo sapiens
<400> 991
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cecgcctate aggetttaga gtcagggaaa aatttaaaat ctgcatttct tectttaatt
120
gcccaatttt taggagtaga tggttattgg ttaacgacgg ggaatactga agattctttt
180
agagaaagtg atgtatttag cccgactgta gtgagtgcag aatctactga tcagtatgtt
tggattgaag ttgtagaagc taacttttct tgcgggacag gtgaatctat tgaatttcac
tttgatgcta ttaatggaaa aattccattc cctgcttcat tctttaaaga aaaacgcgt
<210> 992
<211> 119
<212> PRT
<213> Homo sapiens
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Ser Arg Ile Lys Ala Lys Lys Thr Gln Ala Glu Val Ala Glu Ala Val
                5
1
Lys Met Ser Gln Pro Ala Tyr Gln Ala Leu Glu Ser Gly Lys Asn Leu
                               25
           20
Lys Ser Ala Phe Leu Pro Leu Ile Ala Gln Phe Leu Gly Val Asp Gly
       35
                         . 40
Tyr Trp Leu Thr Thr Gly Asn Thr Glu Asp Ser Phe Arg Glu Ser Asp
                                            60
                       55
   50
Val Phe Ser Pro Thr Val Val Ser Ala Glu Ser Thr Asp Gln Tyr Val
                                      . 75
                   70
Trp Ile Glu Val Val Glu Ala Asn Phe Ser Cys Gly Thr Gly Glu Ser
                                    90
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Ile Glu Phe His Phe Asp Ala Ile Asn Gly Lys Ile Pro Phe Pro Ala
                               105
           100
Ser Phe Phe Lys Glu Lys Arg
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<210> 993
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<212> DNA
<213> Homo sapiens
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tcgcggtccg gatccgcgat gatggccgcg tggcctgaag caatggggta ggtgcccgtg
120
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atgcgtcgct ttggcgcacg aggtttacgc cgtggggagt tcataaggga aataccagca
cagggtcgga ccagttgtta cgatcgctgc atgatctact tgtcgcagga ttatatcggt
240
gagctaccca agcaacatat ctcgctggga aagtttgatc ccgacaatat tcctgcggac
ccgaacgaac tgtttgccac gtggtttaaa gaagccgttg agaacgaagt cggcgaccct
360
actgcggtca ccgtggccac ggtggacgac aacggtcagc ccgatgcgcg agtcgtcgac
420
cttctgtacc tcaactccga cggcttccac
450
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<211> 110
<212> PRT
<213> Homo sapiens
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Met Arg Arg Phe Gly Ala Arg Gly Leu Arg Arg Gly Glu Phe Ile Arg
                                    10
Glu Ile Pro Ala Gln Gly Arg Thr Ser Cys Tyr Asp Arg Cys Met Ile
                                                     30
            20
                                25
Tyr Leu Ser Gln Asp Tyr Ile Gly Glu Leu Pro Lys Gln His Ile Ser
                            40
Leu Gly Lys Phe Asp Pro Asp Asn Ile Pro Ala Asp Pro Asn Glu Leu
                        55
                                            60
    50
Phe Ala Thr Trp Phe Lys Glu Ala Val Glu Asn Glu Val Gly Asp Pro
                    70
                                        75
Thr Ala Val Thr Val Ala Thr Val Asp Asp Asn Gly Gln Pro Asp Ala
                85
                                    90
Arg Val Val Asp Leu Leu Tyr Leu Asn Ser Asp Gly Phe His
                                105
            100
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<212> DNA
<213> Homo sapiens
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aactacgaca tgctcatcgg cgtcaaccag ggagagggcc tcaagttcgt ggaggactct
gcagagagcg aggacggtgt gtctgccagc gcctttgact tcactgtctc caactttgtg
240
gacaacctgt atggctaccc ggaaggcaag gatgtgcttc gggagaccat caagtttatg
tacacagact gggccgaccg ggacaatggc gaaatgcgcc gcaaaaccct gctggcgctc
tttactgacc accaatgggt ggcaccagct gtggccactg ccaagctgca cgccgactac
420
```

```
cagteteceg tetaetttta cacettetae caceaetgee aggeggaggg ceggeetgag
tgggcagatg cggcgcacgg ggatgaactg ccctatgtct ttggcgtgcc catggtgggt
gecacegace tetteccety taacttetee aagaatgacy teatgeteag tycegtygte
atgacctact ggaccaactt cgccaagact ggggacccca accagccggt gccgcaggat
accaagttca tccacaccaa gcccaatcgc ttcgaggagg tggtgtggag caaattcaac
agcaaggaga agcagtatet gcacatagge etgaagceae gegtgegtga caactacege
780
gccaacaagg tggccttctg gctggagetc gtgccccacc tgcacaacct gcacacggag
840
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getggegeee egggeacaeg eegg
924
<210> 996
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<212> PRT
<213> Homo sapiens
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Arg Glu Leu Val Asp Gln Asp Val Gln Pro Ala Arg Tyr His Ile Ala
                                   10
Phe Gly Pro Val Val Asp Gly Asp Val Val Pro Asp Asp Pro Glu Ile
           20
                               25
Leu Met Gln Gln Gly Glu Phe Leu Asn Tyr Asp Met Leu Ile Gly Val
                           40
                                               45
Asn Gln Gly Glu Gly Leu Lys Phe Val Glu Asp Ser Ala Glu Ser Glu
                       55
Asp Gly Val Ser Ala Ser Ala Phe Asp Phe Thr Val Ser Asn Phe Val
                   70
                                       75
Asp Asn Leu Tyr Gly Tyr Pro Glu Gly Lys Asp Val Leu Arg Glu Thr
               85
                                  90
Ile Lys Phe Met Tyr Thr Asp Trp Ala Asp Arg Asp Asn Gly Glu Met
                               105
                                                  110
           100
Arg Arg Lys Thr Leu Leu Ala Leu Phe Thr Asp His Gln Trp Val Ala
                           120
                                               125
Pro Ala Val Ala Thr Ala Lys Leu His Ala Asp Tyr Gln Ser Pro Val
                      135
                                           140
Tyr Phe Tyr Thr Phe Tyr His His Cys Gln Ala Glu Gly Arg Pro Glu
                   150
                                       155
Trp Ala Asp Ala Ala His Gly Asp Glu Leu Pro Tyr Val Phe Gly Val
                                   170
               165
Pro Met Val Gly Ala Thr Asp Leu Phe Pro Cys Asn Phe Ser Lys Asn
           180
                               185
                                                  190
Asp Val Met Leu Ser Ala Val Val Met Thr Tyr Trp Thr Asn Phe Ala
       195
                          200
Lys Thr Gly Asp Pro Asn Gln Pro Val Pro Gln Asp Thr Lys Phe Ile
   210
                      215
                                           220
His Thr Lys Pro Asn Arg Phe Glu Glu Val Val Trp Ser Lys Phe Asn
```

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235
                   230
Ser Lys Glu Lys Gln Tyr Leu His Ile Gly Leu Lys Pro Arg Val Arg
              245
                                  250
Asp Asn Tyr Arg Ala Asn Lys Val Ala Phe Trp Leu Glu Leu Val Pro
                                               270
                              265
           260
His Leu His Asn Leu His Thr Glu Leu Phe Thr Thr Thr Arg Leu
      275
                        280
Pro Pro Tyr Ala Thr Arg Trp Pro Pro Arg Pro Pro Ala Gly Ala Pro
  290
                       295
                                           300
Gly Thr Arg Arg
305
<210> 997
<211> 320
<212> DNA
<213> Homo sapiens
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qccttqtctt tqttcqqtqc ctttqccqct attatgtacq gtctcattct acttqattct
acctggttag ccttactcgg tatcgatgta cgaggtggtg ccatcgaata ttgggcgaag
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tttgatttgc gcccacgcgt
320
<210> 998
<211> 106
<212> PRT
<213> Homo sapiens
<400> 998
Lys Phe Asn Thr Ile Ala Phe Ser Trp Leu Ile Leu Leu Gly Met Ser
                                  10
1
                5
Tyr Gly Ile Lys Thr Gly Ile His Leu Gly Val Asp Ile Val Leu Asn
                               25
                                                   30
Ala Val Pro Lys Arg Val Ser Arg Ala Leu Ser Leu Phe Gly Ala Phe
                          40
Ala Ala Ile Met Tyr Gly Leu Ile Leu Leu Asp Ser Thr Trp Leu Ala
                                          60
Leu Leu Gly Ile Asp Val Arg Gly Gly Ala Ile Glu Tyr Trp Ala Lys
                   70
Met Phe Lys Ile Gly Ile Gly Thr Glu Glu Leu Arg Tyr Pro Ile Phe
               85
                                   90
Met Gln Asp Met Phe Asp Leu Arg Pro Arg
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<210> 999
<211> 401
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969

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<212> DNA
<213> Homo sapiens
<400> 999
acgcgttcag gcggttaaca atcgcgctaa gaagctgacc aaggaaaatg tcggcatggt
acatetgage aagagettea teggtgttta tetetaetea gaaggeaagt ttgtgaecag
120
caactatete aategtgget acaaggacat tetgagetat geagacgatg etagtetttt
gcaaaagcct ccagcagtgg cttcagatga tctggataca ggtctcttga agagggcctt
ggatgagtgg gtggctgatg ctaagaacca catteteaat actgaaaact tetttagegg
gtcaaccggt ctcaacattg acagtttcta cgtctttggt gaccaagaca tctgctggca
gttggcagct attctgaagc agagcatgaa tcgggaattg t
401
<210> 1000
<211> 115
<212> PRT
<213> Homo sapiens
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Met Val His Leu Ser Lys Ser Phe Ile Gly Val Tyr Leu Tyr Ser Glu
1
                 5
                                    10
Gly Lys Phe Val Thr Ser Asn Tyr Leu Asn Arg Gly Tyr Lys Asp Ile
           20
                                25
Leu Ser Tyr Ala Asp Asp Ala Ser Leu Leu Gln Lys Pro Pro Ala Val
Ala Ser Asp Asp Leu Asp Thr Gly Leu Leu Lys Arg Ala Leu Asp Glu
                                            60
                        55
   50
Trp Val Ala Asp Ala Lys Asn His Ile Leu Asn Thr Glu Asn Phe Phe
                   70
                                        75
Ser Gly Ser Thr Gly Leu Asn Ile Asp Ser Phe Tyr Val Phe Gly Asp
                                    90
                85
Gln Asp Ile Cys Trp Gln Leu Ala Ala Ile Leu Lys Gln Ser Met Asn
                                105
Arg Glu Leu
        115
<210> 1001
<211> 351
<212> DNA
<213> Homo sapiens
<400> 1001
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60
ttcccttatg cocctaatgc ggtgattgtt ggcttcctgg ccactaccgt tggttcaatt
atoggtatga ttgtcttccc gctgtttggt ctggcgatga tccttccggg tctgctaact
180
```

```
aacttetteg etggtggtge egetggagte tttggcaaeg egatgggagg aegtaaaggg
gcaattattg gcggcgtagt gcacgggctg tttatcaccc tgttaccagc gatgctaatc
300
cccttactgg aaaccttcgg cttcaaaggc gtcaccttca gtgattccga t
<210> 1002
<211> 117
<212> PRT
<213> Homo sapiens
<400> 1002
Arg Gly Ile Ala Met Arg Leu Val Pro Asn Ala Lys Pro Ala Leu Asp
1
                                    10
Cys Pro Val Leu Phe Pro Tyr Ala Pro Asn Ala Val Ile Val Gly Phe
                                25
           20
Leu Ala Thr Thr Val Gly Ser Ile Ile Gly Met Ile Val Phe Pro Leu
                            40
                                                45
Phe Gly Leu Ala Met Ile Leu Pro Gly Leu Leu Thr Asn Phe Phe Ala
                        55
Gly Gly Ala Ala Gly Val Phe Gly Asn Ala Met Gly Gly Arg Lys Gly
Ala Ile Ile Gly Gly Val Val His Gly Leu Phe Ile Thr Leu Leu Pro
                85
Ala Met Leu Ile Pro Leu Leu Glu Thr Phe Gly Phe Lys Gly Val Thr
                                105
           100
Phe Ser Asp Ser Asp
       115
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<211> 444
<212> DNA
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acccccgcat ggggcacact ctccggccta aagtcccgct tcgctgacgg gccacataaa
180
ctgcgccgtt tgttcgacgc cgaccctcac cgcgctgagc gctacacctt tgacgtcgcg
gatttgcacg tcgatttatc gaagaacctc cttaccgacg agattcgtga cgctctcctc
gaactggctg cgcagatgcg cgtcaccgag cgtcgtgacg cgatgtatgc cggtgagcac
atcaacgtca cegaggaceg cgccgtcctc catacegege tgtgtcgtcc cegcactgac
gagctgcatg ttgacggtca ggat
444
<210> 1004
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<211> 117
<212> PRT
<213> Homo sapiens
<400> 1004
Met Gln Thr Pro Ile Asp Ala Thr Ser Thr Pro Ala Trp Gly Thr Leu
                5
                                   10
Ser Gly Leu Lys Ser Arg Phe Ala Asp Gly Pro His Lys Leu Arg Arg
           20
                               25
Leu Phe Asp Ala Asp Pro His Arg Ala Glu Arg Tyr Thr Phe Asp Val
        35
                           40
                                                45
Ala Asp Leu His Val Asp Leu Ser Lys Asn Leu Leu Thr Asp Glu Ile
   50
                       55
Arg Asp Ala Leu Leu Glu Leu Ala Ala Gln Met Arg Val Thr Glu Arg
                                        75
65
                  70
Arg Asp Ala Met Tyr Ala Gly Glu His Ile Asn Val Thr Glu Asp Arg
                85
                                  90
Ala Val Leu His Thr Ala Leu Cys Arg Pro Arg Thr Asp Glu Leu His
                              105
           100
Val Asp Gly Gln Asp
       115
<210> 1005
<211> 299
<212> DNA
<213> Homo sapiens
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tggtgactcc caagtttaca cctccagcca gggcttctct cctgggtttg catacccacc
tatetatetg cettagecae tegtgtetga egageacete acacetecag aggeteetea
tttcttccca tgcctgcttc tcccacactc ctccctctca catgagggca acttcatcct
cccagttgct caggccccaa acctccatca gttttgactc ttctctcgca cactactcg
<210> 1006
<211> 99
<212> PRT
<213> Homo sapiens
Met Ala Ile Pro Leu Val Thr Ala Ser Ser Pro Met Asp Leu Asn Thr
                                   10
Pro Asn Val Leu Val Thr Pro Lys Phe Thr Pro Pro Ala Arg Ala Ser
Leu Leu Gly Leu His Thr His Leu Ser Ile Cys Leu Ser His Ser Cys
                          40
      35
Leu Thr Ser Thr Ser His Leu Gln Arg Leu Leu Ile Ser Ser His Ala
                       55
                                           60
Cys Phe Ser His Thr Pro Pro Ser His Met Arg Ala Thr Ser Ser Ser
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75
Gln Leu Leu Arg Pro Gln Thr Ser Ile Ser Phe Asp Ser Ser Leu Ala
                                    90
                85
His Tyr Ser
<210> 1007
<211> 389
<212> DNA
<213> Homo sapiens
<400> 1007
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tcaacgacgc caccgaggca cccagaggtg tgacgttgag tgatggccga cgacagggca
acgocggage aateggtgae ttettegeat egaaggaeta caageegtee geggegagee
tecgaggtee ggegagggat eegaaatgga tegaegttea aegeteatte caegagaaeg
aagaaggeee gtacagetgg tacacetgge gegggeagge ttttgacaeg ggegetggat
360
ggcgtaaata cgtccatgcc gcgacaacg
389
<210> 1008
<211> 105
<212> PRT
<213> Homo sapiens
<400> 1008
Met Asp Ser Ile Phe Gly Pro Gly Pro Gly Val Thr Val Ser Glu Ile.
                                   10
Asn Asp Ala Thr Glu Ala Pro Arg Gly Val Thr Leu Ser Asp Gly Arg
                                                    30
           20
                                25
Arg Gln Gly Asn Ala Gly Ala Ile Gly Asp Phe Phe Ala Ser Lys Asp
Tyr Lys Pro Ser Ala Ala Ser Leu Arg Gly Pro Ala Arg Asp Pro Lys
                        55
                                            60
   50
Trp Ile Asp Val Gln Arg Ser Phe His Glu Asn Glu Glu Gly Pro Tyr
                    70
                                        75
Ser Trp Tyr Thr Trp Arg Gly Gln Ala Phe Asp Thr Gly Ala Gly Trp
                85
Arg Lys Tyr Val His Ala Ala Thr Thr
           100
                                105
<210> 1009
<211> 324
<212> DNA
<213> Homo sapiens
<400> 1009
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ngccttcatg gctgntatgc ctggcctcat ccccatccct ggcacccgtg acgatagcca
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ggagttggaa ccccgctccg agagggtgtg ggctcagggg ccaggggtca cacaaactcc
180
agaaggagga cgtagttggt ttgcaaggct gtcctttgcc ctggttgaat aaccttcggt
ctgccccgag aggaacgtgg gcattaggct gcacccgcag gaagccatgt attttctgag
300
aaacttggcc catggtgcag atct
324
<210> 1010
<211> 104
<212> PRT
<213> Homo sapiens
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Met Gly Gln Val Ser Gln Lys Ile His Gly Phe Leu Arg Val Gln Pro
                                    10
Asn Ala His Val Pro Leu Gly Ala Asp Arg Arg Leu Phe Asn Gln Gly
                                25
                                                     30
            20
Lys Gly Gln Pro Cys Lys Pro Thr Thr Ser Ser Phe Trp Ser Leu Cys
                                                45
        35
                            40
Asp Pro Trp Pro Leu Ser Pro His Pro Leu Gly Ala Gly Phe Gln Leu
    50
                        55
                                             60
Arg Gly Ser Ser Ala Glu Met Gln Val Gly Leu Ala Phe Leu Gly Lys
                                         75
65
                    70
His Gln Trp Asn Val Ala Ile Val Thr Gly Ala Arg Asp Gly Asp Glu
                                                         95
                85
                                    90
Ala Arg His Xaa Ser His Glu Gly
            100
<210> 1011
<211> 330
<212> DNA
<213> Homo sapiens
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gatecetgeg getgeetgea etetggaeea egagetetga gageageagg ttgagggeeg
gtgggcagca gctcggaggc tccgcgaggt gcaggagacg caggcatggc cggtgagctg
180
actectgagg aggaggeeca gtacaaaaag gettteteeg eggttgacae ggatggaaac
ggcaccatca atgcccagga gctgggcgcg gcgctgaagg ccacgggcaa gaacctctcg
300
gaggeccage taaagaaact cateteegag
330
<210> 1012
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974

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<211> 55
<212> PRT
<213> Homo sapiens
<400> 1012
Met Ala Gly Glu Leu Thr Pro Glu Glu Glu Ala Gln Tyr Lys Lys Ala
                                    10
Phe Ser Ala Val Asp Thr Asp Gly Asn Gly Thr Ile Asn Ala Gln Glu
           20
                                25
Leu Gly Ala Ala Leu Lys Ala Thr Gly Lys Asn Leu Ser Glu Ala Gln
      35
                            40
Leu Lys Lys Leu Ile Ser Glu
   50
                        55
<210> 1013
<211> 432
<212> DNA
<213> Homo sapiens
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tggcggcgtc tcctcgtcgc cgggagcggc gaggaaggat taacgatgac cagcgacgtc
120
cccgggattg gctcgaacgc cgccactttg gcgcgttccc aggctcgcag tgacaaggtc
gaggetgatt tggeggteca tecegacaag tggegeatte tgggggggga eegteetaet
240
ggcagcetgc acateggtea etaetteggg tegetggega ategggtacg egtgeagaac
aagggcattg agtctttcct tgtcgtcgct gactaccagg ttatctatga ccgcgggggg
ggtggtgacc tgcaggccaa tgttatgtcg aatgtcgccg attacctggc aatcggcatt
420
gacccaacgc gt
432
<210> 1014
<211> 109
<212> PRT
<213> Homo sapiens
<400> 1014
Met Thr Ser Asp Val Pro Gly Ile Gly Ser Asn Ala Ala Thr Leu Ala
                                    10
1
                5
Arg Ser Gln Ala Arg Ser Asp Lys Val Glu Ala Asp Leu Ala Val His
                                25
                                                    30
Pro Asp Lys Trp Arg Ile Leu Gly Gly Asp Arg Pro Thr Gly Ser Leu
                           40
His Ile Gly His Tyr Phe Gly Ser Leu Ala Asn Arg Val Arg Val Gln
Asn Lys Gly Ile Glu Ser Phe Leu Val Val Ala Asp Tyr Gln Val Ile
Tyr Asp Arg Gly Gly Gly Asp Leu Gln Ala Asn Val Met Ser Asn
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95
               85
Val Ala Asp Tyr Leu Ala Ile Gly Ile Asp Pro Thr Arg
           100
                                105
<210> 1015
<211> 467
<212> DNA
<213> Homo sapiens
<400> 1015
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gaaaacttcc cgatgaaagc gcgcacggtt gaagagctga aagaattgga aagagtttta
cagcaaaaga agattgaagc agagtgtctt aaactacgga aggaaattgt agaggctcag
tctggagtta agttgattaa acagcgtcat gaagaggatg atgaagaaga ggaagaggaa
gacaagacag taaaatatag caatttgccc aattacctgc ttggtagtct gagtactgat
tttggggtag atacetettt attgtcaage caattggage ttcattccag agaagagaaa
atcaaccaaa ttatattatt gaaagatatc atttacaagg taaaaactgt tttcaataat
420
gagtttgacg ctgcatataa acaaaaagag tttgaaattg cacgcgt
467
<210> 1016
<211> 155
<212> PRT
<213> Homo sapiens
<400> 1016
Xaa Asn Ser Met Ala Val Lys Gly Arg Ala Leu Lys Cys Phe His Ile
                                    10
Pro Cys Val Val Glu Asn Phe Pro Met Lys Ala Arg Thr Val Glu Glu
                                                    30
                                25
            20
Leu Lys Glu Leu Glu Arg Val Leu Gln Gln Lys Lys Ile Glu Ala Glu
                                                45
                            40
Cys Leu Lys Leu Arg Lys Glu Ile Val Glu Ala Gln Ser Gly Val Lys
                        55
                                            60
Leu Ile Lys Gln Arg His Glu Glu Asp Asp Glu Glu Glu Glu Glu
                    70
                                        75
Asp Lys Thr Val Lys Tyr Ser Asn Leu Pro Asn Tyr Leu Leu Gly Ser
Leu Ser Thr Asp Phe Gly Val Asp Thr Ser Leu Leu Ser Ser Gln Leu
            100
                               105
Glu Leu His Ser Arg Glu Glu Lys Ile Asn Gln Ile Ile Leu Leu Lys
                           120
                                                125
       115
Asp Ile Ile Tyr Lys Val Lys Thr Val Phe Asn Asn Glu Phe Asp Ala
                        135
Ala Tyr Lys Gln Lys Glu Phe Glu Ile Ala Arg
                    150
                                        155
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<210> 1017
<211> 335
<212> DNA
<213> Homo sapiens
<400> 1017
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aacattaaag tgggtcgccc cggctacttt gcggaggtca tggatttcta tgcgcattat
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tggcgtgttc agtcgtcgtg gccgcagccg aatcgcactg ttacttttgc gggaccccgc
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His Tyr Leu Lys Gly Ala Val Thr Arg Phe Arg Pro Asn Phe Ile Val
                            40
Gln Asp Asn Thr Gly Arg Trp Arg Val Gln Ser Ser Trp Pro Gln Pro
                        55
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Asn Arg Thr Val Thr Phe Ala Gly Pro Arg Gly Ile Val Arg Tyr Gly
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Thr Thr Leu Ala Ala Arg Thr His Gly Asn Gly Gln Ala Ile Pro Gln
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Ala Asp Ala Gln Ser Leu Asn Arg Glu
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120
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240
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454
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Arg Gly Ala Arg Trp Cys Gly Met Lys Ser Ala Ser Leu Lys Ser Ser
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                                25
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Trp Leu Glu Glu Pro Leu Pro Glu Pro Ser Gly Pro Ser Val Pro Arg
                                                45
       35
Gly His Arg Gln Ser Gly Arg Glu Gln Val Thr Ser Trp His Cys Gly
                        55
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Ala Arg Thr Arg Arg Ser Thr Ser Ser Met Val Ala Gly Pro Ser Ser
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65
Gly Thr Gly Thr Thr Arg Trp Gln Gly Pro Pro Ser His Thr His Ala
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Gly Ala Thr Gly Arg Thr Ser Arg Pro Arg Val Pro Pro Arg Ser Leu
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Ser Gly Ser Ser Cys Cys Ser Arg Arg Ala Thr Leu Gly
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366
<210> 1022
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            20
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Leu Arg His Val Thr Cys Ser Leu Pro Glu Pro Leu Gly Asn Ile Lys
                            40
                                                45
        35
Gly Val Gln Arg Ala Phe Phe Trp Phe Val Val Ala Ala Ala Pro Ala
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Leu Asp Pro Gln Pro Ala Cys Leu Leu Leu Gln Ser Thr Leu Tyr
                    70
                                        75
Ala Leu Val Leu Ser Asp Asn Leu Gly Ser Met Ser Ile Phe His Ala
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agegtgateg gteegatgge agectacegg geettgegee geeagtacgt geetgegaag
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300
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420
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Asp Leu Asp Gly Gly Ile Leu Thr Ile Gln Gln Thr Lys Phe Gly Lys
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                                                    30
           20
Ser Arg Met Val Pro Leu His Pro Ser Val Ile Gly Pro Met Ala Ala
```

```
40
Tyr Arg Ala Leu Arg Arg Gln Tyr Val Pro Ala Lys Pro Gln Met Thr
Phe Phe Val Gly Ser Arg Gly Val His Arg Gly Glu Pro Leu Gly Asp
                                        75
Arg Gln Val His Arg Val Phe Cys Gln Leu Arg Glu Gln Leu Gly Trp
                                   90
Ile Asp Arg Gly Gly His Gly Arg Pro Arg Val His Asp Leu Arg His
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           100
Ser Phe Ala Val Arg Arg Met Ile Leu Trp His Gln Gln Gly Ala Asn
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                        135
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ccactectga agagecgecg gttettegtg gacatectga ecetgetgag cagecactge
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Cys Thr Leu Arg Glu Lys Glu Leu Lys Leu Pro Thr Phe Arg Ala His
Ser Pro Leu Leu Lys Ser Arg Arg Phe Phe Val Asp Ile Leu Thr Leu
                                                45
Leu Ser Ser His Cys Gln Leu Cys Pro Ala Ala Arg His Leu Ala Val
   50
                        55
Tyr Leu Leu Asp His Phe Met Asp Arg Tyr Asn Val Thr Thr Ser Lys
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75
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Gln Leu Tyr Thr Val Ala Val Ser Cys Leu Leu Leu Ala Ser Lys Phe
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Glu Asp Arg Glu Asp His Val Pro Lys Leu Glu Gln Ile Asn Ser Thr
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           100
Arg Ile Leu Ser Ser Gln Asn Phe Thr Leu Thr Lys Lys
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                            120
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Glu Lys Pro Ala Gly Gly Ile Pro Val Leu Gly Ser Leu Val Asn Thr
                            40
Xaa Pro Glu Ala His His Xaa Trp Leu Lys Val Ile Thr Ala Asn Ile
                        55
                                            60
Leu Gln Leu Gln Val Lys Pro Ser Ala Asn Asp Gln Glu Leu Leu Val
                                        75
                   70
Lys Ile Pro Leu Asp Met Val Ala Gly Phe Asn Thr Pro Leu Val Lys
                                    90
                85
Thr Ile Val Glu Phe His Met Thr Thr Glu Ala Gln Ala Thr Ile Arg
                                105
                                                    110
            100
Met Asp Thr Ser Ala Ser Gly Pro Thr Arg Leu Val Leu Ser Asp Cys
                            120
        115
Ala Thr Ser His Gly Ser Leu Arg Ile Gln Leu Leu His Lys Leu Ser
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Phe Lys Leu Asn Ala Ser Ala Lys Gln Val Met
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           20
Ala Asn Arg Trp Gly Lys Ser Phe Thr Gly Gly Asn Pro Leu Gly Ser
                            40
Pro Cys Asp Ser Cys Thr Arg Ser Ser Gly Pro Ala Arg Asp Asn Phe
Pro His Leu Val Ser Asn Asn Asn Asn Tyr Thr Leu Met Ser Ser
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                   70
Cys Ser Ala Arg His Leu Trp Pro Val Leu Gly Arg Gln Tyr Leu Phe
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Glu Pro Ser His Ser Ser Val Arg Thr Val Ser Leu His Ala
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gctgttgaac agcaactgcc gc
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            20
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Ala Gly Thr His Tyr Arg Tyr Asn Ile Asp Gly Glu Thr Asp Val Pro
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Asp Pro Ala Ser Arg Ala Gln Ala Asn Asp Val His Gly Trp Ser Val
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Val Val Asp Pro Leu Ala Tyr Gln Trp Arg His Pro Asn Trp Gln Gly
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Arg Pro Trp His Glu Ala Val Ile Tyr Glu Leu His Val Gly Val Leu
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Gly Gly Tyr Ala Ala Val Glu Gln Gln Leu Pro
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420
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480
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Val Ile Asp Val Gly Val Gln Ala Gly Asp Asp Thr Leu Tyr Pro Arg
Ile Gly Ile Lys Gly Ala His Val Ile Lys Asp Gly Lys Ala Asp Arg
                                            60
   50
                        55
Gly Ile Phe Phe Cys Gly Thr Gly Met Gly Met Ala Ile Thr Ala Asn
                    70
                                        75
                                                            80
Lys Val Pro Gly Ile Arg Ala Cys Thr Ala His Asp Ser Phe Ser Val
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Glu Arg Leu Ile Met Ser Asn Asp Ala His Val Leu Cys Leu Gly Gln
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<213> Homo sapiens

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	cagtgatgag	aatccacatt	tgtatttcaa	gataatgtag	tttaaaaaaa

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Ser Tyr Ser Gly Pro Gly Pro Gly Met Gly Ile Ser Ala Asn Asn Gln
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Met His Gly Gln Gly Pro Ser Gln Pro Cys Gly Ala Val Pro Leu Gly
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                               75
Arg Met Pro Ser Ala Gly Met Gln Asn Arg Pro Phe Pro Gly Asn Met
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Ser Ser Met Thr Pro Ser Ser Pro Gly Met Ser Gln Gln Gly Pro
       100 105 110
Gly Met Gly Pro Pro Met Pro Thr Val Asn Arg Lys Ala Gln Glu Ala
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Ala Ala Ala Val Met Gln Ala Ala Ala Asn Ser Ala Gln Ser Arg Gln
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Gly Ser Phe Pro Gly Met Asn Gln Ser Gly Leu Met Ala Ser Ser Ser
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Pro Tyr Ser Gln Pro Met Asn Asn Ser Ser Ser Leu Met Asn Thr Gln
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Ala Pro Pro Tyr Ser Met Ala Pro Ala Met Val Asn Ser Ser Ala Ala
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Ser Val Gly Leu Ala Asp Met Met Ser Pro Gly Glu Ser Lys Leu Pro
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Leu Pro Leu Lys Ala Asp Gly Lys Glu Glu Gly Thr Pro Gln Pro Glu
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Ser Lys Ser Lys Asp Ser Tyr Ser Ser Gln Gly Ile Ser Gln Pro Pro
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Thr Pro Gly Asn Leu Pro Val Pro Ser Pro Met Ser Pro Ser Ser Ala
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Ser Ile Ser Ser Phe His Gly Asp Glu Ser Asp Ser Ile Ser Ser Pro
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Gly Trp Pro Lys Thr Pro Ser Ser Pro Lys Ser Ser Ser Ser Thr Thr
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Thr Gly Glu Lys Ile Thr Lys Val Tyr Glu Leu Gly Asn Glu Pro Glu
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                                 300
Arg Lys Leu Trp Val Asp Arg Tyr Leu Thr Phe Met Glu Glu Arg Gly
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        310
Ser Pro Val Ser Ser Leu Pro Ala Val Gly Lys Lys Pro Leu Asp Leu
```

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Pho	N	Lau	Тъг~	325	Cve	Wa 1	Luc	Glu			Gly	T.e.11	Δla		Val
FIIC	AT 9	Deu	340	Val	Cys	val	_,5	345		01,	01,	Deu	350	·	
Asn	Lvs	Asn		Lvs	Trp	Ara	Glu			Thr	Asn	Leu		Val	Gly
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Thr	Ser	Ser	Ser	Ala	Ala	Ser	Ser	Leu	Lys	Lys	Gln	Tyr	Ile	Gln	Tyr
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Leu	Phe	Ala	Phe	Glu	Cys	Lys	Ile	Glu	Arg	Gly	Glu	Glu	Pro	Pro	Pro
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Glu	٧al	Phe	Ser	Thr	Gly	Asp	Thr	Lys	Lys	Gln	Pro	Lys	Leu	Gln	Pro
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Pro	Ser	Pro	Ala	Asn	Ser	Gly	ser		Gln	Gly	Pro	Gln		Pro	Gln
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Ser	Thr	-	Ser	Asn	Ser	Met		Glu	Val	Pro	Gly		Leu	Lys	Pro
_		435		_		_	440					445		~1 .	63
Pro		Pro	Ala	Ser	Thr		His	GIY	GIn	met	Thr	Pro	wec	Gin	GIY
~1	450	C	C	The sec	T1.	455	17-1	175.0	7.00	Dro	460 Phe	C0~	n cr	17-1	cor
465	ALG	261	361	1111	470	261	Vai	птъ	ASP	475	FILE	261	ASP	Val	480
	Ser	Ser	Phe	Pro		Ara	Asn	Ser	Met		Pro	Asn	Ala	Pro	
пор	0.1	001	1	485	_,_	9			490					495	-1-
Gln	Gln	Glv	Met		Met	Pro	Asp	Val		Gly	Arg	Met	Pro	Tyr	Glu
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Pro	Asn	Lys	Asp	Pro	Phe	Gly	Gly	Met	Arg	Lys	Val	Pro	Gly	Ser	Ser
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	Tyr	Asn	Gln	Ser		Ser	Gly	Ala	Met		Asn	Leu	Gly	Met	
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D	T	C1	C1-	565	m	D=0	C1	C1-	570	Dva	Dro	Sar	C1.,	575	Dro
PIO	Tyr	GIA	580	GIN	ryr	PIO	GIA	585	GIY	PIO	Pro	261	590	GIII	PIO
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110		595	U-,		0111	110	600		-1-	110		605			-7-
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Gln	Ile		Thr	His	Gly	Ile		Leu	Gln	Met	Met		GIA	Pro	Leu
6 3 -	_	675	a			~1	680	01	~ 1	.		685			3
GIN		Ser	Ser	Ser	GIU		Pro	Gin	GIn	ASI	Met	Trp	Ата	Ala	Arg
) Cr	690	Mo+	Dra	T:	Dra	695	G1n	λεν	A ~~	Cl n	700 Gly	Dro	Gly	Glv	Dro
705	vaħ	. IE C	FIU	TAT	710	TÀT	GIII	A3II	AT 9	715	U L Y	110	J-Y	y	720
	Gln	Ala	Pro	Pro		Pro	Glv	Met	Asn		Thr	Asp	Asp	Met	
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Ser	Gln	Arg		Pro	Tyr	Met	Ser		Ser	Ala	Ser	Met		Pro	Ile

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6 1	3	755	D	~1 	n	C	760	Gln	The	Dro	Dro	765	Tan	Pro	λen
Int	770	PIU	PIO	GIII	PIO	775	ıyı	GIII	1111	FIG	780	Ser	Dea		
uie		Car	۵ra	בו ג	Pro		Pro	Ala	Ser	Dhe		Ara	Ser	Leu	Glu
785	116	SCI	Ar 9	Ata	790	Jei	110	7124	561	795		*** 3	002		800
	Δτα	Met	Ser	Pro		Lvs	Ser	Pro	Phe		Pro	Ser	Met	Lys	
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Gln	Lvs	Val	Met		Thr	Val	Pro	Thr		Gln	Val	Thr	Gly	Pro	Pro
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Asp	Ile	Phe	Gly	Ile	Leu		Glu	Tyr	Glu	Val		Asp	Pro	Ser	Gln
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•	Ala	Leu	Asp	His		Ala	Aia	Arg	Lys		Asp	ser	GIN	ser	
945	•	•		a 1	950	61	~ 1	Glu	7.00	955	cl.,	Cvc	т1а	7 = -	960
АТА	Asp	Asp	ser		гÀг	GIU	GIU	GIU	970	Ala	GIU	Cys	TIE	975	мэр
ħ cm	~1	Cl.	y c n	965	Cl.	Nen	Glu	Glu		Δen	Ser	Glu	Lvs	-	Glu
ASP	GIU	GIU	980	Giu	GIU	лар	GIU	985	OI W	nop	501		990		
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Asp	Pro	Lys	Glu	Lys	Pro	Lys		Ala	Ser	Lys	Phe	Asp	Lys	Leu	Pro
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Lys	Leu	Gly	Arg	Val	Gln	Glu	Phe	Asn	Ser	Gly	Leu	Leu	His		
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Lys	Met			Pro	Pro	Arg		Arg	Pro	Pro	Pro			Ser	ser
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Ala			ьуs	ьуs	GIU			Gly	Lys	GIY			GIU	Gru	GIII
6 3-	1090		c	- 1_	- 1 -	1099		T10	Nan	7.00	1100		Sar	Λ1 =	Ara
1109		rys	ser	11e			1111	Ile	ASP	1115		Deu	261	AIA	1120
		ת 1 ת	f an	Dro	1110		n 1 =	Asn	Dro			Gln	Thr	Glu	
PLO	GIA	ATG	neu	1125		vah	Aid	HOII	1130					1139	
Ser	Lve	Phe	Pro			Tle	Gln	Gln			Ser	His	Ara		
Jer	y -3	2110	1140		319	110	3111	1149		_,,			1150		
Lvs	Leu	Leu			G] u	Pro	Arσ	Ser		Asp	Glu	Thr	-		Cys
_, _		1159					1160					1165			•
Thr	Ile		-	Trp	Gln	asA		Leu	Ala	Lys	Arg	Cys	Ile	Cys	Val
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Ser			Val	Arg	Ser			Phe	Val	Pro	Gly	Asn	Asp	Ala	Glu
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1190
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Met Ser Lys His Pro Gly Leu Val Leu Ile Leu Gly Lys Leu Ile Leu
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Leu His His Glu His Pro Glu Arg Lys Arg Ala Pro Gln Thr Tyr Glu
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     1235
Trp Trp Asp Cys Leu Glu Val Leu Arg Asp Asn Thr Leu Val Thr Leu
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Ala Asn Ile Ser Gly Gln Leu Asp Leu Ser Ala Tyr Thr Glu Ser Ile
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Cys Leu Pro Ile Leu Asp Gly Leu Leu His Trp Met Val Cys Pro Ser
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Ala Glu Ala Gln Asp Pro Phe Pro Thr Val Gly Pro Asn Ser Val Pro
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         1300
                                        1310
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                                  1340
Glu Lys Phe Tyr Ala Thr Leu Val Arg Tyr Val Gly Asp Arg Lys Asn
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Gly Asp Ala Leu Ala Ala Arg Ala Ile Ala Val Gln Lys Gly Ser Ile
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Gly Asn Leu Ile Ser Phe Leu Glu Asp Gly Val Thr Met Ala Gln Tyr
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                                 1420
Pro Pro Ser Val Asp Met Met Cys Arg Ala Ala Lys Ala Leu Leu Ala
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Met Ala Arg Val Asp Glu Asn Arg Ser Glu Phe Leu Leu His Glu Gly
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                    1450
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aagtetttgg etgggteetg caacatagee aggatteagt gacaggtgag gaccaeteea
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Phe Gln Lys Ser Ile Gln Gly Leu Gln Tyr Ile Gln Asn Leu Glu Trp
       35
                           40
Ser Ser Pro Val Thr Glu Ser Trp Leu Cys Cys Arg Thr Gln Pro Lys
                                            60
Thr Phe Ser Thr Lys Ser Ser Pro Glu Thr Leu Ala Leu Thr Leu Ser
                    70
                                        75
Pro Ser Leu Pro Ser Ala Pro Arg Leu Tyr Leu Val Ser Leu Cys Ala
                                    90
Leu Val Thr Pro Gln Ala Lys Val Ile Pro Cys Gly Gly Leu Ser
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           100
Arg Ala Leu Arg Asp Val Gln Gln His Pro Trp Leu Leu
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388
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Asp Met Ser Ile Glu Thr Ala Tyr Leu Pro Arg Leu Leu Val Ser Leu
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                                                    30
Ala Leu Thr Ile Pro Val Leu Ala Leu Ser Met Ile Pro Ala Leu His
                            40
                                                45
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Phe Pro His Trp Pro Leu Trp Ala Leu Ala Leu Thr Thr Pro Val Val
                        55
                                            60
Phe Trp Gly Ala Trp Pro Leu His His Ala Ala Trp Thr Asn Leu Arg
                                        75
65
                    70
His Gly Ala Ala Ile Met Asp Thr Leu Val Ser Leu Gly Val Leu Thr
                                    90
                                                        95
Ser Tyr Leu Trp Ser Val Trp Met Leu Thr Thr Gly Gly Glu His Leu
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Tyr Leu Glu Val Ala Val His Arg His Asp Ala Asp Pro Gly Arg Gln
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gegeeggeea geggeeeget geetgaggat tggtacgeeg ceategatta eetgatteee
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Ala Met Val Gly Cys Val Gly Thr Asp Ala Tyr Gly Ala Gln Leu Arg
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Asp Ala Leu Leu Val Glu Gly Ile Asp Cys Gln Ala Val Ser Thr Val
                                          60
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Asp Gly Ser Ser Gly Val Ala Leu Ile Val Val Asp Asp Ser Ser Gln
                                      75
                  70
Asn Ala Ile Val Ile Val Ala Gly Ser Asn Gly Glu Leu Thr Pro Ala
              85
                                 90
Lys Leu Gln Thr Phe Asp Ser Val Leu Gln Ala Ala Asp Val Ile Val
           100
                               105
Cys Gln Leu Glu Thr Pro Met Asp Thr Val Gly His Ala Pro Lys Arg
                                              125
       115
                           120
Gly Arg Glu Leu Gly Lys Thr Val Ile Leu Asn Pro Ala Pro Ala Ser
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   130
Gly Pro Leu Pro Glu Asp Trp Tyr Ala Ala Ile Asp Tyr Leu Ile Pro
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Asn Glu Ser Glu Ala Ser Ala Leu Ser Gly Val Val Val Asp Ser Leu
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Asp Ser Ala Lys Val Ala Ala Thr Arg
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egegecatge aegattacea egeacegeeg geagagegea tgccaattgg geacegaagg
180
cagaccacca cccaggtgca aagcaacagt ggtagagcgg tcgctcatcg acgaaacgta
cggaagaaga cgaagagacg gagcaggaaa gacctgttat ggaatcacag aaccacatcg
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Asn Leu Phe Asn His Ser Lys Phe Pro Glu Thr His Leu Met Asn Leu
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25
Phe Leu Gly Val Cys Lys Ala Leu Arg Ala Met His Asp Tyr His Ala
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Pro Pro Ala Glu Arg Met Pro Ile Gly His Arg Arg Gln Thr Thr
Gln Val Gln Ser Asn Ser Gly Arg Ala Val Ala His Arg Arg Asn Val
                                                            80
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Arg Lys Lys Thr Lys Arg Arg Ser Arg Lys Asp Leu Leu Trp Asn His
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                                    90
Arg Thr Thr Ser Gly Arg Ala Ala Ser Thr Lys Pro Tyr Ala His Arg
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Asp Ile Lys Pro Gly Thr Cys Cys Lys Leu Leu
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180
ggagaaaagc caggcaccaa ggtggatgac tactgggagc ctggcaaggg gctgctgcag
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aagtgtgagc agtgtgagca gcggctgggc cacgctggca aggtgcgcac cctcctcctg
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10

5

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Ala Met Gln Arg Pro Pro Pro Gly Val Lys Leu Val Ile Glu Ala Val
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Cys Ile Met Lys Gly Ile Lys Pro Lys Lys Val Pro Gly Glu Lys Pro
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                                          60
  50
Gly Thr Lys Val Asp Asp Tyr Trp Glu Pro Gly Lys Gly Leu Leu Gln
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Asp Pro Gly His Phe Leu Glu Ser Leu Phe Lys Phe Asp Lys Asp Asn
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Ile Gly Asp Val Val Ile Lys Ala Ile Gln Pro Tyr Ile Asp Asn Glu
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                                                   110
Glu Phe Gln Pro Ala Thr Ile Ala Lys Val Ser Lys Gly Cys Pro Phe
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                                               125
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Ile Trp Pro Trp Gly Gly Ala Met Pro Lys Tyr Pro Phe Val Ala Lys
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                                           140
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Ala Val Glu Pro Lys Arg Gln Ala Leu Leu Glu Ala Gln Asp Asp Leu
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Gly Val Thr Gln Arg Ile Leu Asp Glu Ala Lys Gln Arg Leu Arg Glu
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Val Glu Asp Gly Ile Ala Thr Met Gln Ala Lys Tyr Arg Glu Cys Ile
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                                                  190
Thr Lys Lys Glu Glu Leu Glu Leu Lys Cys Glu Gln Cys Glu Gln Arg
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Leu Gly His Ala Gly Lys Val Arg Thr Leu Leu Leu Gln Gly Leu Gln
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ccaccaggtt gcagccaaag gattcagaag acaatgatca ttccatcagc atgcactatg
480
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Asp Lys Tyr Lys Val Met Lys Leu Cys Thr Glu Pro His Val Ser Gln
            20
Thr Pro Gly Ser Pro Gly Phe Phe Ser Gly Arg Pro His Ser His Cys
                            40
Asn Ser Trp Pro Gly Gln Met Leu Thr His Arg Asp Ile Lys His Ser
                        55
Asn Thr Pro Ser Thr Arg Leu Gln Pro Lys Asp Ser Glu Asp Asn Asp
                                        75
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His Ser Ile Ser Met His Tyr Ala Ala Lys Glu Arg Phe Trp His Ala
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25

Ala Pro Glu Arg Leu Asp Glu Gly Leu Lys Arg Leu Ala Ala Val Ile

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20

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Asp Tyr Ala Tyr Ala Met Ser Val Asn Leu Thr Thr Glu Asn Arg Arg
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Ala Trp Glu Arg Asp Leu Leu Glu Arg Tyr Leu Trp Arg Leu Ala Glu
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Glu Gly Val Ala Asn Pro Pro Ser Phe Glu Gln Ala Trp Leu Arg Tyr
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Arg Gln Gln Pro Phe His Val Gly Ile Phe Ser Leu Leu Thr Ile Gly
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Ala Gly Arg Phe Gln Pro Ala Met Gln Pro Ala Asp Ser Xaa Pro Xaa
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120
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240
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                                25
                                                    30
Ser Gly Leu Cys Pro Gly Gly Leu Phe Pro Ile Leu Gly Leu His Pro
                            40
                                                45
       35
Trp Gln Phe Ser Leu Pro Ser Gln Val Ser Gly Pro Arg Met Val Phe
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Ile Arg Pro Gly Pro Leu Arg Ser Ala Glu Arg Gln Met Pro Leu Ala
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Pro Gly Ala
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<212> DNA
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240
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341
<210> 1058
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Arg Ile Ala Ser Ser Ala Glu Asp Tyr Gln Ala Leu Phe Asp Ala Val
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                                               45
Pro Ser Lys Ala Asn Gly Ile Cys Leu Cys Thr Gly Ser Leu Gly Val
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Arg Ala Glu Asn Asp Leu Pro Glu Met Ala Glu Arg Phe Gly Pro Arg
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Ile Ala Phe Ala His Leu Arg Ala Thr Lys Arg Asp Ala Asp Gly Leu
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Ser Phe His Glu Ser Asp His Leu Asp Gly Asp Val Asp Met Val Ala
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Asn Arg Arg Glu Val Glu Arg Ser Gly Leu Arg Thr Thr Phe Met Asn
           20
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Lys Leu Asp Val Asp Glu Glu Val Ala Asp Ile Leu Ile Asp Glu Gly
                          40
                                              45
Phe Thr Gly Ile Glu Glu Ile Ala Tyr Val Pro Met Gln Glu Leu Leu
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                       55
Glu Ile Glu Ala Phe Asp Glu Asp Thr Ile Asn Glu Leu Arg Ala Arg
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70
Ala Arg Asn Ala Leu Leu Thr Glu Ala Ile Ala Gln Glu Glu Arg Leu
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Glu Thr Ala Gln Asp Leu Leu Glu Leu Glu Gly Val Thr Pro Glu Leu
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Ala Ala Lys Leu Ala Glu Arg Gln Val Arg Thr Arg
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<212> PRT
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Phe Leu Leu Pro Ile Gln Val Gln Thr Trp Glu Glu Arg Gly Glu
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Gly Arg Arg Leu His Gly Pro Pro Arg Val Ala Ala Lys Pro Val Phe
       35
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Ser Pro Leu Gly Gln Lys Arg His Arg Gly Pro Lys Ser Pro Ser Cys
Pro Asn Pro Pro Pro Thr Ala Arg Ser Gly Cys Gln Ile Gln Cys Ser
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                                        75
Arg Ile Leu Leu Leu Ser Ala Pro Lys His Leu Gln Pro Leu Leu
Gly Leu Gln Lys Gly Phe Leu Glu Gly Ala Lys Gly Thr Phe Tyr Leu
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Leu Gly Cys Ala Val Ala Gly Ser Ser Phe Thr Ser Thr Trp Asn Phe
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Leu Lys Ser Ser Leu Leu Pro Gly Met Gln His Ala Val Phe Ser Ser
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Met Gly Met Phe Ser Ala Ser Ser Leu Val Thr Ala Leu Leu Leu Leu
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Arg Thr Pro Leu Thr Pro Ser Ser Arg Pro Arg Ala Gly Arg Trp His
Leu Ser Cys Ser Ser Ser Ala Ser Ser Phe Arg Ala Leu Leu Cys Trp
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Thr Ser Arg Leu Leu Ser Arg Ser Leu Cys Ser Val Ala Arg Ser
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Ser Ala Ser Ser Arg Leu Ser Tyr Gln Val Lys Leu Gln Met Ala Leu
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Glu Leu Met Arg Lys Glu Leu Glu Asp Ala Leu Thr Gln Glu Ala Asn
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Val Gly Lys Lys Thr Val Ile Trp Lys Glu Lys Val Glu Met Gln Arg
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Gln Arg Phe Arg Leu Glu Phe Glu Lys His Arg Gly Phe Leu Ala Gln
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Ala Leu Lys Glu Leu Ala Asp Glu Leu Gln Glu Arg Cys Gln Arg Pro
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Ala Leu Gly Leu Leu Glu Gly Val Arg Gly Val Leu Ser Arg Ser Lys
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Ala Val Thr Arg Leu Glu Ala Glu Asn Ile Pro Met Glu Leu Lys Thr
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Ala Cys Cys Ile Pro Gly Arg Arg Glu Leu Leu Arg Lys Phe Gln Val
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Asp Val Lys Leu Asp Pro Ala Thr Ala His Pro Ser Leu Leu Leu Thr
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Ala Asp Leu Arg Ser Val Gln Asp Gly Glu Pro Trp Arg Asp Val Pro
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                                  315
Asn Asn Pro Glu Arg Phe Asp Thr Trp Pro Cys Ile Leu Gly Leu Gln
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Ser Phe Ser Ser Gly Arg His Tyr Trp Glu Val Leu Val Gly Glu Gly
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Ala Glu Trp Gly Leu Gly Val Cys Gln Asp Thr Leu Pro Arg Lys Gly
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Glu Thr Met Pro Ser Pro Glu Asn Gly Val Trp Ala Leu Trp Leu Leu
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Lys Gly Asn Glu Tyr Met Val Leu Ala Ser Pro Ser Val Pro Leu Leu
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Gln Leu Glu Ser Pro Arg Cys Ile Gly Ile Phe Leu Asp Tyr Glu Ala
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Gly Glu Ile Ser Phe Tyr Asn Val Thr Asp Gly Ser Tyr Ile Tyr Thr
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                                             430
Phe Asn Gln Leu Phe Ser Gly Leu Leu Arg Pro Tyr Phe Phe Ile Cys
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Asp Ala Thr Pro Leu Ile Leu Pro Pro Thr Thr Ile Ala Gly Ser Gly
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Asp His Leu
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<211> 892

<212> DNA

<213> Homo sapiens

<400> 1065

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gecetagaga eccageagag aagggaetet ggeeaetgaa ggggeeetee eattgtgget 240

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Gln Thr Glu Ser His Arg Val Ala Gly Glu Asp Met Leu Val Leu Arg
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240
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Val Ser Ala Asp Ile Glu Gly Asp Trp Thr Met His Val Glu Gly Trp
                                           60
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Ser Asp Thr Trp Gly Thr Trp His His Asn Ala Asn Ala Lys Leu Ala
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Ala Ala Ile Asp Val Glu Leu Val Cys Ala Glu Gly His Ala Leu Ile
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Asn Glu Ala Val Arg His Ala Glu Gln Ser Gly Asp Thr Asp Ala Ile
           100
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Thr Ala Leu Arg Glu Thr Asp Ala Asn Leu Thr Leu Asp Arg Ala Pro
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Asp Ser Leu Gln Gln Val Ile Asn Thr Tyr Ala
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<210> 1069
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<212> DNA
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Asn Ser Lys Gly Ile Ala Cys Ser Phe Ser Gly Ala Glu His Leu Arg
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Cys His Val Arg Leu Gly Ala Ser His Gly Gly Asp Leu Arg Tyr His
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Leu Gln Gln Asn Val His Phe Lys Glu Glu Thr Val Lys Leu Phe Ile
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Cys Glu Leu Val Met Ala Leu Asp Tyr Leu Gln Asn Gln Arg Ile Ile
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His Arg Asp Met Lys Pro Asp Asn Ile Leu Leu Asp Glu His Gly His
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780
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Gly Lys Phe Leu Leu Gln Lys Val Leu Phe Leu His Ile Leu Arg
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Ser Leu Leu Ala Leu Glu Pro Arg Thr Tyr His Gly Phe Lys Val Cys
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Phe Asn Glu Leu Asn Gly Ile Asn Phe Val Val Leu Met Gln Ile Gln
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Arg Ala Lys Asn Thr Thr Thr Ser Ala Lys Val Asp Asp Val Glu Gln
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                                   90
Ala Leu Arg Gly Val Leu Pro Pro Asp Val Val Thr Pro Ala Glu Leu
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360
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His	Val		Ile	His	Phe	Met		Thr	Ser	Thr	Tyr		Ile	Cys	Glu
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Ser Ala Asn Trp Asp Glu Glu Arg Ser Trp Lys Leu Leu Asn Tyr Glu
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Arg Gln Gly Gly Tyr Thr Gly Leu Arg Lys Ala Leu Thr Met Pro Pro
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Asp Asp Val Val Ser Leu Val Lys Asp Ala Asn Leu Arg Gly Arg Gly
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Gly Ala Gly Phe Pro Thr Gly Met Lys Trp Ser Phe Val Pro Lys Asp
Asn Pro Asn Pro Thr Tyr Leu Val Val Asn Gly Asp Glu Ser Glu Pro
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Gly Thr Cys Lys Asp Met Pro Leu Met Met Ala Ser Pro His Thr Leu
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Phe Ile Tyr Ile Arg Gly Glu Val Leu His Val Val Arg Arg
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120
atatecacaa ggtteagete egecaggaga etgtegeega teatttteag gaagttttet
ttgctgcgtt cgtagtcttg gtgcaggtcg aagctgtagt cgcttttgta gatgtcccgg
240
tagaagaact cgggcagggt gcctttcatg gcttccagga tgacgggttt gctcatcccg
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<210> 1086
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Phe Phe Tyr Arg Asp Ile Tyr Lys Ser Asp Tyr Ser Phe Asp Leu His
                           40
                                               45
      35
Gln Asp Tyr Glu Arg Ser Lys Glu Asn Phe Leu Lys Met Ile Gly Asp
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                                           60
Ser Leu Leu Ala Glu Leu Asn Leu Val Asp Ile Asp Thr Val Arg Lys
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Ile Ala Asn Ser Pro Leu Gly Ser Ser Glu Thr Leu Tyr Asp Phe Glu
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Arg Met Thr His Met Glu Val Trp Leu Arg Glu Asn Tyr Val
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Phe Leu Val Asp Gly Ile His Pro His Asp Leu Gly Gln Val Leu Asp
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Asp His Gly Val Ser Ile Arg Val Xaa His His Cys Ala Trp Pro Ile
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       35
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His Arg Ser Leu Gly Val Gln Ser Thr Ala Arg Ala Ser Phe Tyr Phe
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                                           60
Tyr Asn Thr Phe Pro Glu Val Asp Ala Leu Ala Ser Ala Val Arg Ala
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Ala Arg Glu Phe Phe Gly Val His
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tattcacaaa atgctagcag ttatcaccac agtgggagcc acagggagct ctgaggataa
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gcagggatgt cgagggatgg gacagaactt gattgaaggc agacagacct ccaaattctt
480
gactcagaca gaatgatcac tgatccagcg agacgtcagg atcgagagga gtgtagcaag
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Arg Val Val Arg Met Gly Leu Gly Glu Glu Ala Leu Pro Leu Phe Phe
                            40
Phe Asn Leu Ala Lys Gly Leu Leu Gly Gln Gly His Pro Ser Leu Leu
                        55
Leu Gly Ala Ser Ile Phe Leu His Ser Val Lys Asn Gly Gly Val Ile
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Gln Lys Tyr Pro Pro Tyr Cys Gln Gly Phe Gly Glu Gly Ser Lys Lys
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catggctttg ccgaggcgag tcagcacttt tttggacgac ctttaaaaga acttaatatc
gacgagtttg ccttgttagt aggaatggtg aaagggcctt ctatttataa tcctgaacga
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His Phe Phe Gly Arg Pro Leu Lys Glu Leu Asn Ile Asp Glu Phe Ala
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Leu Leu Val Gly Met Val Lys Gly Pro Ser Ile Tyr Asn Pro Glu Arg
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His Pro Lys Arg Ala Leu Ser Arg Arg Asn Thr Val Leu Ala Ile Leu
Lys Ser Gln Asp Arg Leu Thr Glu Ser Asp Tyr Asn Ile Leu Arg Lys
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Gln Pro Ile Arg Leu Ala Asp Lys His Gln Glu Arg Ser Val Tyr Gly
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Asp Tyr Leu Asp Leu Val Ser Met Gln Leu Ser Arg Asp Phe Asp Arg
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Cys Met
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Leu Glu Glu Phe Gly Asp Asp Phe Asp Ala Arg Met Gly Ala Glu Ala
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Val Arg Glu Leu Leu His Ala Ile Asp Leu Glu His Glu Ile Gly Arg
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Leu Ser Lys Arg Leu Lys Leu Met Glu Ala Phe Gln Gly Ser Gly Asn
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180
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Glu Arg Thr Leu Phe Gln Leu Asp Glu Ala Ile Glu Ala Leu Asp Ala
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              85
Ala Ile Glu Tyr Lys Asn Glu Ala Ile Thr Cys Arg Gln Arg Val Leu
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Lys Leu Ser Tyr Leu Ser Ser Ser Glu Thr Arg Ala Leu Leu Cys Lys
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Tyr Phe Asp Lys Val Gly Gln Gln Pro Met Ala Pro Pro Ala Pro Pro
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His Gly Thr Cys Gly Glu Val Ser His Gly Ser Cys Ser Ser Gly Tyr
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Pro Val Ser Ser Gln Thr Gly Gly Gln Asn Gln Asp Gln Leu Ile Cys
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Arg Ala Ala
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Ser Ser Glu Glu Ala Arg Lys Leu Met Val Arg Leu Thr Arg His Thr
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Gly Arg Lys Gln Pro Pro Val Ser Glu Ser His Trp Arg Thr Leu Leu
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Gln Asp Met Leu Thr Met Gln Gln Asn Val Tyr Thr Cys Leu Asp Ser
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Asp Ala Cys Tyr Glu Ile Phe Thr Glu Ser Leu Leu Cys Ser Ser Arg
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Leu Glu Asn Ile His Leu Ala Gly Gln Met Met His Cys Ser Ala Cys
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Ser Glu Asn Pro Pro Ala Gly Ile Ala His Lys Gly Lys Pro His Tyr
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       115
Arq Val Ser Tyr Glu Lys Ser Ile Asp Leu Val Leu Ala Ala Ser Arg
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Glu Tyr Phe Asn Ser Ser Thr Asn Leu Thr Asp Ser Cys Met Asp Leu
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Glu Glu Leu Asp Leu Ile Gln Ala Val Gly Cys Leu Glu Glu Phe Gly
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Val Lys Ile Leu Pro Leu Gln Val Arg Leu Cys Pro Asp Arg Ile Ser
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Leu Ile Lys Glu Cys Ile Ser Gln Ser Pro Thr Cys Tyr Lys Gln Ser
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Thr Lys Leu Leu Gly Leu Ala Glu Leu Leu Arg Val Ala Gly Glu Asn
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Pro Glu Glu Arg Arg Gly Gln Val Leu Ile Leu Leu Val Glu Gln Ala
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Leu Arg Phe His Asp Tyr Lys Ala Ala Ser Met His Cys Gln Glu Leu
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Met Ala Thr Gly Tyr Pro Lys Ser Trp Asp Val Cys Ser Gln Leu Gly
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Dho		Lou	Th∽	uic	Cve	Pro	Pro	Ser	Sar	Tle		I.e.ii	T.eu	Leu	Ala
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C1 n	T10	Wi o	wie		Cly	Gly	Glu.) cn		Sor	בומ	Ser	Pro		Thr
GIII	TIE	urs		GIU	GLY	Gry	Olu	345	110	JCI	7,14	001	350		
C 0 ==	f 1/0	- ר ת	340	cln	Glu	Asp	Glu		Gly	Ual	Pro	Glv		Asn	Ser
ser	rys	355	vai	GIII	GIU	дор	360	val	GIY	Vai	110	365	562	7.0	
71 7	y c.p.		Len	7 ~~	Trn	Thr		Δla	Thr	Thr	Met		Val	Len	Ser
Ala	370	Leu	Бец	Arg	111	375	1111	A.C	1111		380	2,5	•		
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385	1111	1111	1111	1111	390	5 ,5	****	,,,	200	395					400
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0111	110	111	2,0	405	501			- , -	410					415	
Lve	Cva	Glv	Glv		Tvr	Gln	Tle	Glv		Thr	Ala	Asn	Glu		Leu
2,5	Cys	Cry	420		.,.			425					430		
Glu	Lvs	Gln		Cvs	His	Pro	Phe		Glu	Ser	Val	Ile		Asn	Pro
	-,-	435	U -1	-,-			440	-1-				445			
Phe	Val		Glu	Ser	Glu	Gly		Tvr	Asp	Thr	Tyr	Gln	His	Val	Pro
	450					455		•	•		460				
Val		Ser	Phe	Ala	Glu	Val	Leu	Leu	Arq	Thr	Gly	Lys	Leu	Ala	Glu
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	Lys	Asn	Lys	Gly	Glu	Val	Phe	Pro	Thr	Thr	Glu	Val	Leu	Leu	Gln
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				400					400						
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			500	Ala		Pro Val		505	Met			Cys	510	Ala	
Leu	Leu	Ala 515	500 Leu	Ala Pro	Gln	Val	Leu 520	505 Asp	Met Ala	Asn	Arg	Cys 525	510 Phe	Ala Glu	Lys
Leu	Leu	Ala 515	500 Leu	Ala Pro	Gln	Val Ser	Leu 520	505 Asp	Met Ala	Asn	Arg Ala	Cys 525	510 Phe	Ala Glu	Lys
Leu Gln	Leu Ser 530	Ala 515 Pro	500 Leu Ser	Ala Pro Ala	Gln Leu	Val Ser 535	Leu 520 Leu	505 Asp Gln	Met Ala Leu	Asn Ala	Arg Ala 540	Cys 525 Tyr	510 Phe Tyr	Ala Glu Tyr	Lys Ser
Leu Gln Leu	Leu Ser 530	Ala 515 Pro	500 Leu Ser	Ala Pro Ala	Gln Leu Arg	Val Ser	Leu 520 Leu	505 Asp Gln	Met Ala Leu	Asn Ala Phe	Arg Ala 540	Cys 525 Tyr	510 Phe Tyr	Ala Glu Tyr	Lys Ser His
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Leu Gln Leu 545	Leu Ser 530 Gln	Ala 515 Pro Ile	Ser Tyr	Ala Pro Ala Ala	Gln Leu Arg 550	Val Ser 535	Leu 520 Leu Ala	505 Asp Gln Pro	Met Ala Leu Cys Leu	Asn Ala Phe 555	Arg Ala 540 Arg	Cys 525 Tyr Asp	510 Phe Tyr Lys	Ala Glu Tyr Cys Thr	Lys Ser His 560
Leu Gln Leu 545 Pro	Leu Ser 530 Gln Leu	Ala 515 Pro Ile Tyr	500 Leu Ser Tyr Arg	Ala Pro Ala Ala Ala 565	Gln Leu Arg 550 Asp	Val Ser 535 Leu Pro	Leu 520 Leu Ala Lys	505 Asp Gln Pro Glu	Met Ala Leu Cys Leu 570	Asn Ala Phe 555 Ile	Arg Ala 540 Arg Lys	Cys 525 Tyr Asp Met	510 Phe Tyr Lys Val	Ala Glu Tyr Cys Thr 575	Lys Ser His 560 Arg
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Leu Gln Leu 545 Pro	Leu Ser 530 Gln Leu Val	Ala 515 Pro Ile Tyr	Ser Tyr Arg Arg	Ala Pro Ala Ala Ala 565 His	Gln Leu Arg 550 Asp Glu	Val Ser 535 Leu Pro	Leu 520 Leu Ala Lys Glu	SOS Asp Gln Pro Glu Ala 585	Met Ala Leu Cys Leu 570 Trp	Asn Ala Phe 555 Ile Pro	Arg Ala 540 Arg Lys Glu	Cys 525 Tyr Asp Met	510 Phe Tyr Lys Val Leu 590	Ala Glu Tyr Cys Thr 575 Ile	Lys Ser His 560 Arg
Leu Gln Leu 545 Pro	Leu Ser 530 Gln Leu Val	Ala 515 Pro Ile Tyr Thr	Ser Tyr Arg Arg	Ala Pro Ala Ala Ala 565 His	Gln Leu Arg 550 Asp Glu	Val Ser 535 Leu Pro	Leu 520 Leu Ala Lys Glu Tyr	SOS Asp Gln Pro Glu Ala 585	Met Ala Leu Cys Leu 570 Trp	Asn Ala Phe 555 Ile Pro	Arg Ala 540 Arg Lys Glu	Cys 525 Tyr Asp Met Asp Leu	510 Phe Tyr Lys Val Leu 590	Ala Glu Tyr Cys Thr 575 Ile	Lys Ser His 560 Arg
Leu Gln Leu 545 Pro His	Leu Ser 530 Gln Leu Val	Ala 515 Pro Ile Tyr Thr Lys 595	Ser Tyr Arg Arg 580 Gln	Ala Pro Ala Ala Ala 565 His	Gln Leu Arg 550 Asp Glu His	Val Ser 535 Leu Pro His Cys	Leu 520 Leu Ala Lys Glu Tyr 600	SOS Asp Gln Pro Glu Ala 585 Asn	Met Ala Leu Cys Leu 570 Trp Glu	Asn Ala Phe 555 Ile Pro	Arg Ala 540 Arg Lys Glu Leu	Cys 525 Tyr Asp Met Asp Leu 605	510 Phe Tyr Lys Val Leu 590 Asp	Ala Glu Tyr Cys Thr 575 Ile Phe	Lys Ser His 560 Arg Ser
Leu Gln Leu 545 Pro His	Leu Ser 530 Gln Leu Val Thr	Ala 515 Pro Ile Tyr Thr Lys 595	Ser Tyr Arg Arg 580 Gln	Ala Pro Ala Ala Ala 565 His	Gln Leu Arg 550 Asp Glu His	Val Ser 535 Leu Pro His Cys	Leu 520 Leu Ala Lys Glu Tyr 600	SOS Asp Gln Pro Glu Ala 585 Asn	Met Ala Leu Cys Leu 570 Trp Glu	Asn Ala Phe 555 Ile Pro	Arg Ala 540 Arg Lys Glu Leu Val	Cys 525 Tyr Asp Met Asp Leu 605	510 Phe Tyr Lys Val Leu 590 Asp	Ala Glu Tyr Cys Thr 575 Ile Phe	Lys Ser His 560 Arg Ser
Leu Gln Leu 545 Pro His Leu Gln	Leu Ser 530 Gln Leu Val Thr	Ala 515 Pro Ile Tyr Thr Lys 595 Gln	Ser Tyr Arg Arg S80 Gln	Ala Pro Ala Ala 565 His Leu	Gln Leu Arg 550 Asp Glu His	Val Ser 535 Leu Pro His Cys Gly 615	Leu 520 Leu Ala Lys Glu Tyr 600 Leu	SOS Asp Gln Pro Glu Ala 585 Asn Arg	Met Ala Leu Cys Leu 570 Trp Glu Lys	Asn Ala Phe 555 Ile Pro Arg Gly	Arg Ala 540 Arg Lys Glu Leu Val 620	Cys 525 Tyr Asp Met Asp Leu 605 Asp	510 Phe Tyr Lys Val Leu 590 Asp	Ala Glu Tyr Cys Thr 575 Ile Phe Gln	Lys Ser His 560 Arg Ser Thr
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Leu Gln Leu 545 Pro His Leu Gln Phe 625	Leu Ser 530 Gln Leu Val Thr Ala 610 Thr	Ala 515 Pro Ile Tyr Thr Lys 595 Gln	Ser Tyr Arg Arg 580 Gln Ile Asp	Ala Pro Ala Ala Ala 565 His Leu Leu	Gln Leu Arg 550 Asp Glu His Gln Gln 630	Val Ser 535 Leu Pro His Cys Gly 615 Tyr	Leu 520 Leu Ala Lys Glu Tyr 600 Leu	SOS Asp Gln Pro Glu Ala 585 Asn Arg	Met Ala Leu Cys Leu 570 Trp Glu Lys Glu	Asn Ala Phe 555 Ile Pro Arg Gly Thr 635	Arg Ala 540 Arg Lys Glu Leu Val 620 Ile	Cys 525 Tyr Asp Met Asp Leu 605 Asp	510 Phe Tyr Lys Val Leu 590 Asp Val Gly	Ala Glu Tyr Cys Thr 575 Ile Phe Gln Leu	Lys Ser His 560 Arg Ser Thr Arg Ala 640
Leu Gln Leu 545 Pro His Leu Gln Phe 625	Leu Ser 530 Gln Leu Val Thr Ala 610 Thr	Ala 515 Pro Ile Tyr Thr Lys 595 Gln	Ser Tyr Arg Arg 580 Gln Ile Asp	Ala Pro Ala Ala Ala 565 His Leu Leu Asp	Gln Leu Arg 550 Asp Glu His Gln Gln 630	Val Ser 535 Leu Pro His Cys Gly 615 Tyr	Leu 520 Leu Ala Lys Glu Tyr 600 Leu	SOS Asp Gln Pro Glu Ala 585 Asn Arg	Met Ala Leu Cys Leu 570 Trp Glu Lys Glu	Asn Ala Phe 555 Ile Pro Arg Gly Thr 635	Arg Ala 540 Arg Lys Glu Leu Val 620 Ile	Cys 525 Tyr Asp Met Asp Leu 605 Asp	510 Phe Tyr Lys Val Leu 590 Asp Val Gly	Ala Glu Tyr Cys Thr 575 Ile Phe Gln Leu	Lys Ser His 560 Arg Ser Thr Arg Ala 640
Leu Gln Leu 545 Pro His Leu Gln Phe 625 Glu	Leu Ser 530 Gln Leu Val Thr Ala 610 Thr	Ala 515 Pro Ile Tyr Thr Lys 595 Gln Ala	Ser Tyr Arg Arg 580 Gln Ile Asp	Ala Pro Ala Ala Ala 565 His Leu Leu Asp Glu 645	Gln Leu Arg 550 Asp Glu His Gln 630 Ser	Val Ser 535 Leu Pro His Cys Gly 615 Tyr	Leu 520 Leu Ala Lys Glu Tyr 600 Leu Lys Tyr	505 Asp Gln Pro Glu Ala 585 Asn Arg Arg	Met Ala Leu Cys Leu 570 Trp Glu Lys Glu Ile 650	Asn Ala Phe 555 Ile Pro Arg Gly Thr 635 Ala	Arg Ala 540 Arg Lys Glu Leu Val 620 Ile	Cys 525 Tyr Asp Met Asp Leu 605 Asp Leu Ser	510 Phe Tyr Lys Val Leu 590 Asp Val Gly Leu	Ala Glu Tyr Cys Thr 575 Ile Phe Gln Leu Ala 655	Lys Ser His 560 Arg Ser Thr Arg Ala 640 Gln
Leu Gln Leu 545 Pro His Leu Gln Phe 625 Glu	Leu Ser 530 Gln Leu Val Thr Ala 610 Thr	Ala 515 Pro Ile Tyr Thr Lys 595 Gln Ala	Ser Tyr Arg Arg 580 Gln Ile Asp	Ala Pro Ala Ala Ala 565 His Leu Leu Asp Glu 645	Gln Leu Arg 550 Asp Glu His Gln 630 Ser	Val Ser 535 Leu Pro His Cys Gly 615 Tyr	Leu 520 Leu Ala Lys Glu Tyr 600 Leu Lys Tyr	505 Asp Gln Pro Glu Ala 585 Asn Arg Arg	Met Ala Leu Cys Leu 570 Trp Glu Lys Glu Ile 650	Asn Ala Phe 555 Ile Pro Arg Gly Thr 635 Ala	Arg Ala 540 Arg Lys Glu Leu Val 620 Ile	Cys 525 Tyr Asp Met Asp Leu 605 Asp Leu Ser	510 Phe Tyr Lys Val Leu 590 Asp Val Gly Leu	Ala Glu Tyr Cys Thr 575 Ile Phe Gln Leu Ala 655	Lys Ser His 560 Arg Ser Thr Arg Ala 640 Gln
Leu Gln Leu 545 Pro His Leu Gln Phe 625 Glu Arg	Leu Ser 530 Gln Leu Val Thr Ala 610 Thr Thr	Ala 515 Pro Ile Tyr Thr Lys 595 Gln Ala Leu Ser	Ser Tyr Arg Arg 580 Gln Ile Asp Glu Val	Ala Pro Ala Ala Ala Ala Ala S65 His Leu Leu Asp Glu 645 Ser	Gln Leu Arg 550 Asp Glu His Gln 630 Ser	Val Ser 535 Leu Pro His Cys Gly 615 Tyr Val	Leu 520 Leu Ala Lys Glu Tyr 600 Leu Lys	505 Asp Gln Pro Glu Ala 585 Asn Arg Ser Val 665	Met Ala Leu Cys Leu 570 Trp Glu Lys Glu Ile 650 Phe	Asn Ala Phe 555 Ile Pro Arg Gly Thr 635 Ala Met	Arg Ala 540 Arg Lys Glu Leu Val 620 Ile Ile Thr	Cys 525 Tyr Asp Met Asp Leu 605 Asp Leu Ser	510 Phe Tyr Lys Val Leu 590 Asp Val Gly Leu 670	Ala Glu Tyr Cys Thr 575 Ile Phe Gln Leu Ala 655 Glu	Lys Ser His 560 Arg Ser Thr Arg Ala 640 Gln Phe
Leu Gln Leu 545 Pro His Leu Gln Phe 625 Glu Arg	Leu Ser 530 Gln Leu Val Thr Ala 610 Thr Thr	Ala 515 Pro Ile Tyr Thr Lys 595 Gln Ala Leu Ser Thr 675	Ser Tyr Arg S80 Gln Ile Asp Glu Val 660 Asp	Ala Pro Ala Ala Ala Ala S655 His Leu Leu Asp Glu 645 Ser Ser	Gln Leu Arg 550 Asp Glu His Gln 630 Ser Arg	Val Ser 535 Leu Pro His Cys Gly 615 Tyr Val Trp Leu	Leu 520 Leu Ala Lys Glu Tyr 600 Leu Lys Tyr Glu Ser 680	505 Asp Gln Pro Glu Ala 585 Asn Arg Arg Ser Val 665 Thr	Met Ala Leu Cys Leu 570 Trp Glu Lys Glu Ile 650 Phe Leu	Asn Ala Phe 555 Ile Pro Arg Gly Thr 635 Ala Met Glu	Arg Ala 540 Arg Lys Glu Leu Val 620 Ile Ile Thr	Cys 525 Tyr Asp Met Asp Leu 605 Asp Leu Ser His	510 Phe Tyr Lys Val Leu 590 Asp Val Gly Leu 670 Asn	Ala Glu Tyr Cys Thr 575 Ile Phe Gln Leu Ala 655 Glu Arg	Lys Ser His 560 Arg Ser Thr Arg Ala 640 Gln Phe
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Leu Gln Leu 545 Pro His Leu Gln Phe 625 Glu Arg Pro Gln	Leu Ser 530 Gln Leu Val Thr Ala 610 Thr Thr Tyr Phe Asp 690	Ala 515 Pro Ile Tyr Thr Lys 595 Gln Ala Leu Ser Thr 675 Leu	Ser Tyr Arg Ses Arg Seo Gln Ile Asp Glu Val 660 Asp	Ala Pro Ala Ala Ala Ala S65 His Leu Leu Asp Glu 645 Ser Leu	Gln Leu Arg 550 Asp Glu His Gln 630 Ser Arg Gly	Val Ser 535 Leu Pro His Cys Gly 615 Tyr Val Trp Leu	Leu 520 Leu Ala Lys Glu Tyr 600 Leu Lys Tyr Glu Ser 680	505 Asp Gln Pro Glu Ala 585 Asn Arg Arg Val 665 Thr	Met Ala Leu Cys Leu 570 Trp Glu Lys Glu Ile 650 Phe Leu Lys	Asn Ala Phe 555 Ile Pro Arg Gly Thr 635 Ala Met Glu Thr	Arg Ala 540 Arg Lys Glu Leu Val 620 Ile Ile Thr Ile Asp 700	Cys 525 Tyr Asp Met Asp Leu 605 Asp Leu Ser His Glu 685 Pro	510 Phe Tyr Lys Val Leu 590 Asp Val Gly Leu 670 Asn Glu	Ala Glu Tyr Cys Thr 575 Ile Phe Gln Leu Ala 655 Glu Arg Ala	Lys Ser His 560 Arg Ser Thr Arg Ala 640 Gln Phe Ala

705					710					715					720
His	Glu	Arg	Leu	Gln 725	Tyr	Tyr	Phe	Thr	Leu 730	Leu	Glu	Asn	Cys	Gly 735	-
Ala	Asp	Leu	Gly 740	Asn	Суѕ	Ala	Ile	Lys 745	Pro	Glu	Thr	His	Ile 750	Arg	Leu
Leu	Lys	Lys 755	Phe	Lys	Val	Val	Ala 760	Ser	Gly	Leu	Asn	Tyr 765	Lys	Lys	Leu
Thr	Asp 770	Glu	Asn	Met	Ser	Pro 775	Leu	Glu	Ala	Leu	Glu 780	Pro	Val	Leu	Ser
Ser 785	Gln	Asn	Ile	Leu	Ser 790	Ile	Ser	Lys	Leu	Val 795	Pro	Lys	Ile	Pro	Glu 800
Lys	Asp	Gly	Gln	Met 805	Leu	Ser	Pro	Ser	Ser 810	Leu	Tyr	Thr	Ile	Trp 815	Leu
Gln	Lys	Leu	Phe 820	Trp	Thr	Gly	Asp	Pro 825	His	Leu	Ile	Lys	Gln 830	Val	Pro
Gly	Ser	Ser 835	Pro	Glu	Trp	Leu	His 840	Ala	Tyr	Asp	Val	Cys 845	Met	Lys	Tyr
	850	_				855	_			Thr	860		_		
Thr 865	Phe	Ser	Pro	Lys	Ala 870	Val	Thr	Lys	Leu	Ser 875	Val	Glu	Ala	Arg	Lys 880
Glu	Met	Thr	Arg	Lys 885	Ala	Ile	Lys	Thr	Val 890	Lys	His	Phe	Ile	Glu 895	Lys
Pro	Arg	Lys	Arg 900	Asn	Ser	Glu	Asp	Glu 905	Ala	Gln	Glu	Ala	Lys 910	Asp	Ser
Lys	Val	Thr 915	Tyr	Ala	Asp	Thr	Leu 920	Asn	His	Leu	Glu	Lys 925	Ser	Leu	Ala
His	Leu 930	Glu	Thr	Leu	Ser	His 935	Ser	Phe	Ile	Leu	Ser 940	Leu	Lys	Asn	Ser
Glu 945	Gln	Glu	Thr	Leu	Gln 950	Lys	Tyr	Ser	His	Leu 955	Tyr	Asp	Leu	Ser	Arg 960
Ser	Glu	Lys	Glu	Lys 965	Leu	His	Asp	Glu	Ala 970	Val	Ala	Ile	Cys	Leu 975	Asp
Gly	Gln	Pro	Leu 980	Ala	Met	Ile	Gln	Gln 985	Leu	Leu	Glu	Val	Ala 990	Val	Gly
		995					1000)		Gln		1005	5		
	1010)				1015	5			Asp	1020)			
Asp	Pro	Leu	Lys	Val	Leu	Glu	Gly	Val	Val	Ala	Ala	Val	His	Thr	Ser
1025					1030					1035					1040
Val	Asp	Lys	Gly	Glu 1049		Leu	Val	Ser	Pro 1050	Glu)	Asp	Leu	Leu	Glu 1055	_
Leu	Arg			•		_	_		-	Pro		_		_	Ile
His	Val	Leu 1075		Ile	Leu	Gly	Gln 1080		Phe	His	Leu	Thr 1085		Glu	Asp
Ser	Lys	Leu	Leu	Val	Phe	Phe	Arg	Thr	Glu	Ala	Ile	Leu	Lys	Ala	Ser
	1090					1095					1100				
		Gln	Arg	Gln			Ile	Ala	Asp	Ile		Asn	Glu	Glu	
1105					1110					1115		_		_	1120
Arg	Tyr	Cys	Leu			Glu	Leu	Leu		Ser	Ser	His	His		
C11-	Db. 4	G1-		1125		•		•	1130		m	D	D	1135	
GIU	rne	GIN	HIS	Leu	val	Leu	ren	Leu	GIN	Ala	rrp	YIO	PLO	rie C	гÀ2

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Ser Glu Tyr Val Ile Thr Asn Asn Pro Trp Val Arg Leu Ala Thr Val
     1155 1160 1165
Met Leu Thr Arg Cys Thr Met Glu Asn Lys Glu Gly Leu Gly Asn Glu
            1175 1180
Val Leu Lys Met Cys Arg Ser Leu Tyr Asn Thr Lys Gln Met Leu Pro
        1190 1195
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Ala Glu Gly Val Lys Glu Leu Cys Leu Leu Leu Leu Asn Gln Ser Leu
                   1210 1215
             1205
Leu Leu Pro Ser Leu Lys Leu Leu Glu Ser Arg Asp Glu His Leu
        1220 1225 1230
His Glu Met Ala Leu Glu Gln Ile Thr Ala Val Thr Thr Val Asn Asp
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Ser Asn Cys Asp Gln Glu Leu Leu Ser Leu Leu Asp Ala Lys Leu
  1250 1255 1260
Leu Val Lys Cys Val Ser Thr Pro Phe Tyr Pro Arg Ile Val Asp His
                                1275
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Leu Leu Ala Ser Leu Gln Gln Gly Arg Trp Asp Ala Glu Glu Leu Gly
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       1285 1290
Arg His Leu Arg Glu Ala Gly His Glu Ala Glu Ala Gly Ser Leu Leu
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Leu Thr Ile Ala Ser Ile Leu Ala Leu Ala Gly Ala Leu Ile Leu Ala
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                                           60
Gly Gln Ser Thr Leu Leu Ser Glu Lys Ser Gln Leu Glu Glu Met Val
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gageceaceg tegttggtga ggteeeegag atgecacgte aaaegateaa egetgattta
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His Glu Gly Glu His Leu Leu Thr Leu Asp Asp Thr Asp Arg Thr Leu
       35
                            40
Asp Pro Asp Asp Leu Val Ile Ala Asp Asp Ser Gly Ala Ile Gly Leu
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                                            60
Ala Gly Val Met Gly Gly Ala Ala Thr Glu Val Thr Ala Glu Thr Thr
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Ser Ile Ile Leu Glu Gly Ala His Phe Asp Pro Met Thr Gly Ala Arg
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                                     90
 Ala Tyr Arg Arg His Lys Leu Gly Ser Glu Ala Ser Arg Arg Phe Glu
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             100
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 Glu Leu Leu Ala Gln Tyr Gly Gly Ala Thr Val Gly Glu Pro Thr Val
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                        135
 Val Gly Glu Val Pro Glu Met Pro Arg Gln Thr Ile Asn Ala Asp Leu
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 Ile Leu Thr Arg
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 tcgcgaccca ggtgatcttt ccctcggcat agattgacgt ggcattctcg tcggagtgaa
 tcaagcagcg cttaggcagc tgctgggccg gcggcttcgc ctagctcgcc ggagcacacg
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 aaccettece gaagataace gecaaggeet ggeacacett etgetgeace catteegget
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 Ser Pro Leu Tyr Trp Val Gly Ser Gly Gly Glu Thr His Ala Asp Lys
 Gly Arg Ser Gly Cys Arg Arg Ala Gly Ile His Arg Asn Ser Pro Tyr
 Cys Gly Tyr Val His Gln Cys Gly Gly Gly Arg Arg Gln Ala Gly Met
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                                                  30
Arg Leu Asp Gly Cys His Leu Pro Phe Phe Pro Leu Pro Leu Asp Asn
                          40
Ser Ser Gln Pro Ser Glu Leu Gly Gly Arg Gln Ser Trp Asn Leu Thr
                       55
                                          60
Ala Gly Cys Val Ser Glu Asp Met Cys Ser Pro Asp Pro Cys Phe Asn
                                      75
                   70
Gly Gly Thr Cys Leu Val Thr Trp Asn Asp Phe His Cys Thr Cys Pro
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Ala Asn Phe Thr Gly Pro Thr Cys Ala Gln Gln Leu Trp Cys Pro Gly
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Gln Pro Cys Leu Pro Pro Ala Thr Cys Glu Glu Val Pro Asp Gly Phe
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agaacetega agagegegte geecagegea cacaggeget ggetgaagee aaccaacgee
180
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atggaageeg ggggeeaget caeeggegge ategeeeatg attteaacaa catgetgaee
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ateggeegne ttactgaege egeegtateg teegeecate gegeggeege ceteacecat
420
eggetgetgg egttetegeg eegeeagteg etggeeecce geeegetgga eeceaaccag
ctggtagcgt ccctggagga tctgttccag cgaaccaaag gcgcgcatat cacgctcaaa
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1
Arg Thr Ser Lys Ser Ala Ser Pro Ser Ala His Arg Arg Trp Leu Lys
           20
                                25
                                                    30
Pro Thr Asn Ala Trp Gln Asn Lys Met Phe Lys Arg Lys Arg Ala Glu
                            40
       35
Asp Ala Leu Arg His Ala Gln Lys Met Glu Ala Gly Gly Gln Leu Thr
                        55
                                           60
Gly Gly Ile Ala His Asp Phe Asn Asn Met Leu Thr Gly Ile Ile Gly
                                       75
                   70
Ser Leu Asp Leu Met Gln Arg Tyr Ile Xaa Ala Gly Arg Ser Asp Glu
                                                        95
                                   90
               85
Ile Gly Arg Leu Thr Asp Ala Ala Val Ser Ser Ala His Arg Ala Ala
                               105
                                                    110
           100
Ala Leu Thr His Arg Leu Leu Ala Phe Ser Arg Arg Gln Ser Leu Ala
                                               125
       115
                          120
Pro Arg Pro Leu Asp Pro Asn Gln Leu Val Ala Ser Leu Glu Asp Leu
```

```
140
                       135
Phe Gln Arg Thr Lys Gly Ala His Ile Thr Leu Lys Val Gln Leu Gly
                                      155
                  150
Arg Asp Ile Trp Pro Val Asn Thr Asp Ala Ser Gln Leu Glu Asn Ala
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Leu Leu Asn Leu Ala Ile
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<212> DNA
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cgcggcgaca gctatccccc ccccn
325
<210> 1110
<211> 108
<212> PRT
<213> Homo sapiens
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Thr Gly Glu His Gln Gly Gly Thr Met Gln Thr Thr Leu Pro Ser Ser
Leu Lys Pro Ser Ser Leu Lys Ile Val Ala Pro Leu Gly Gly Ile Leu
           20
                               25
Val Pro Leu Asp Gln Val Pro Asp Pro Val Phe Ala Gln Lys Met Val
                            40
                                               45
Gly Asp Gly Ile Ser Leu Asp Pro Ile Ser Asn Glu Leu Leu Ala Pro
                       55
Val Ala Gly Thr Val Thr Gln Leu His Asn Ala His His Ala Leu Thr
                                       75
                   70
Ile Thr Thr Pro Glu Gly Ile Glu Val Leu Val His Ile Gly Leu Asp
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Thr Val Met Leu Arg Gly Asp Ser Tyr Pro Pro Pro
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                               105
<210> 1111
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<212> DNA
<213> Homo sapiens
<400> 1111
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gcagtacgtg gcggcatcgt cgacgtcttc ccaccggtgc tagaacaccc ggtccgtatc
180
gatttttttg gtgacgagat cgaggaaatg acctccttcg cggtagccga ccagcgatcc
240
accgacgaga ctcaccaaga actgatctgc gctccttgcc gtgagctcat cctcaccgac
300
gaggtacgtt cccgagccaa ggctttgctg accgaccatc ccgaattagc tgacatgttg
gagcggatcg gcaacggtca agctt
385
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<212> PRT
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Xaa Arg Val Ala Pro Val Arg Leu Ala Val Gly Glu Glu His Asp Leu
1
                 5
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Thr Glu Leu Ala Thr Glu Leu Val Asn Ala Ala Tyr Ser Arg Val Asp
                                25
                                                    30
            20
Met Val Glu Arg Arg Gly Glu Phe Ala Val Arg Gly Gly Ile Val Asp
                                                45
        35
                            40
Val Phe Pro Pro Val Leu Glu His Pro Val Arg Ile Asp Phe Phe Gly
                                            60
    50
                        55
Asp Glu Ile Glu Glu Met Thr Ser Phe Ala Val Ala Asp Gln Arg Ser
Thr Asp Glu Thr His Gln Glu Leu Ile Cys Ala Pro Cys Arg Glu Leu
                                    90
                85
Ile Leu Thr Asp Glu Val Arg Ser Arg Ala Lys Ala Leu Leu Thr Asp
                                                    110
                                105
His Pro Glu Leu Ala Asp Met Leu Glu Arg Ile Gly Asn Gly Gln Ala
                            120
        115
<210> 1113
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<212> DNA
<213> Homo sapiens
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cacteggact teteggggac eggeggagte gateagaceg accgttetae caatategae
gageacacea tegaggagat geateagate geetegegtt acceegacte cegtteggeg
ttgetgeega teetgeacet ggtteagteg gtggaeggae geatetegee ggteggtatt
240
gagactgcgg ctgaagtgct cggcattacc accgcccagg tatccggggt ggcgacettc
300
```

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tacaccatgt ataagaagca ccctgcgggc cagcatcaca tcggtgtctg caccacggcg
ctgtgcgccg tcatgggtgg cgaggaggtg cttgcccgtn
400
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<211> 133
<212> PRT
<213> Homo sapiens
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Xaa Arg Pro Met Ser Asp Arg Glu Pro Val Asn Leu Gly Tyr Pro Tyr
                                    10
Val Glu Ser Phe His Ser Asp Phe Ser Gly Thr Gly Gly Val Asp Gln
            20
                                25
Thr Asp Arg Ser Thr Asn Ile Asp Glu His Thr Ile Glu Glu Met His
                            40
Gln Ile Ala Ser Arg Tyr Pro Asp Ser Arg Ser Ala Leu Leu Pro Ile
                                            60
                        55
Leu His Leu Val Gln Ser Val Asp Gly Arg Ile Ser Pro Val Gly Ile
                                        75
                    70
Glu Thr Ala Ala Glu Val Leu Gly Ile Thr Thr Ala Gln Val Ser Gly
                85
                                    90
Val Ala Thr Phe Tyr Thr Met Tyr Lys Lys His Pro Ala Gly Gln His
            100
                                105
                                                    110
His Ile Gly Val Cys Thr Thr Ala Leu Cys Ala Val Met Gly Glu
       115
                            120
Glu Val Leu Ala Arg
   130
<210> 1115
<211> 402
<212> DNA
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ggcgaggctg acttcacgtc gctgctgcag gatcaggttg acggcgttgt gaagcgtcag
getgagattg geetggatat egteaatgae ggegagtaeg gteaegegat gettgaeaeg
gttgattacg gcgcgtggtg gacgtattcc atctctcgtt tcggcgggct gtcctttgag
gacgtgcagc gttttgatgt gcgtcccccg gctggccgtg acggtcgcct gtctttctcg
360
tegttegetg agegeegega etggeagegt tteeggaege gt
<210> 1116
<211> 134
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<213> Homo sapiens <400> 1116 Ser Pro Thr Ala Gln Ile Arg Glu Arg Thr Ala Met Thr Ile Arg Thr 10 5 Thr His Val Gly Ser Leu Pro Arg Thr Pro Glu Leu Ile Glu Ala Asn 30 25 20 Arg Ala Arg Arg Glu Gly Ser Leu Gly Glu Ala Asp Phe Thr Ser Leu 45 40 Leu Gln Asp Gln Val Asp Gly Val Val Lys Arg Gln Ala Glu Ile Gly 55 60 Leu Asp Ile Val Asn Asp Gly Glu Tyr Gly His Ala Met Leu Asp Thr 75 70 Val Asp Tyr Gly Ala Trp Trp Thr Tyr Ser Ile Ser Arg Phe Gly Gly 85 Leu Ser Phe Glu Asp Val Gln Arg Phe Asp Val Arg Pro Pro Ala Gly 100 105 Arg Asp Gly Arg Leu Ser Phe Ser Ser Phe Ala Glu Arg Arg Asp Trp 120 115 Gln Arg Phe Arg Thr Arg 130 <210> 1117 <211> 307 <212> DNA <213> Homo sapiens <400> 1117 ggcgccggtc ttgccctggc tggaagtggc atgcagacct tggtgcggaa cccgctggct gacccctacc tgctaggtgt atcggctggc gcaagtgtgg gagcaaccgc agtcatcgct ttggggatgt tcacttcgtg gggaactcac cgactcactc ttggtgccct tgtaggggcc ttggcggcag ctgcattggt ctatctcatt tccatggcgc aaggaggcat gacgccgctt cggttggtgc tgtcgggcgt ggtgttgtcc tcggcgttct cgcgttggcg agtttcctcg 300 tctttcg 307 <210> 1118 <211> 102 <212> PRT <213> Homo sapiens <400> 1118 Gly Ala Gly Leu Ala Leu Ala Gly Ser Gly Met Gln Thr Leu Val Arg 10 Asn Pro Leu Ala Asp Pro Tyr Leu Leu Gly Val Ser Ala Gly Ala Ser 25 20 Val Gly Ala Thr Ala Val Ile Ala Leu Gly Met Phe Thr Ser Trp Gly 40 45 35 Thr His Arg Leu Thr Leu Gly Ala Leu Val Gly Ala Leu Ala Ala Ala

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50
                        55
Ala Leu Val Tyr Leu Ile Ser Met Ala Gln Gly Gly Met Thr Pro Leu
                   70
                                        75
Arg Leu Val Leu Ser Gly Val Val Leu Ser Ser Ala Phe Ser Arg Trp
                85
                                    90
Arg Val Ser Ser Ser Phe
            100
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<212> DNA
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aactcgccgg atctgctcat ttgtgacgag ccgacgaccg ccttggacgt cacggtgcag
teteaggtae tggegaetat egatgaggtg ettgaetegg ttggtgeege atgeetattt
240
attacccacg atttggcggt tgtctcgcac atctgccggg agcttatcgt gatgacgtcg
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353
<210> 1120
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<212> PRT
<213> Homo sapiens
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Arg Val Leu Glu Met Leu Glu Gln Val Gly Ile Glu Asp Pro Ala Arg
                5
                                    10
Val Met Asp Ser Tyr Pro His Gln Leu Ser Gly Gly Gln Arg Gln Arg
           20
                                25
Val Leu Leu Ala Met Ala Leu Val Asn Ser Pro Asp Leu Leu Ile Cys
                                                45
       35
                           40
Asp Glu Pro Thr Thr Ala Leu Asp Val Thr Val Gln Ser Gln Val Leu
                                            60
Ala Thr Ile Asp Glu Val Leu Asp Ser Val Gly Ala Ala Cys Leu Phe
                   70
                                        75
Ile Thr His Asp Leu Ala Val Val Ser His Ile Cys Arg Glu Leu Ile
                                    90
Val Met Thr Ser Gly Lys Val Val Glu Ala Gly Ser Ala Arg Asp Val
           100
                                105
Leu Ser His Pro Asp
       115
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<212> DNA
<213> Homo sapiens
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cccagggcac ggtgttcatc ccgaccttga cgatgatgaa aggcgtcgcc gcgaatctca
ccgcageggg cgttcccggt gtgagctatg cacacgccca cgagagcacg cgcgcgatgc
180
atgccgcggg cgttccggtc ctggccggca ccgacgccta catcgggtcc ttcacacggg
240
categeegee ataeggegag ageatgeaeg aegaagaege etaeateggg eteetegaae
gggcaatgcc gccatacggc gagagcatgc acgacgaact cgctctgctc gtggacgccg
geotgtcaac ageogaageg etgegegetg ecacetegae gggege
406
<210> 1122
<211> 117
<212> PRT
<213> Homo sapiens
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Met Leu Ala Gln Gly Thr Val Phe Ile Pro Thr Leu Thr Met Met Lys
                                    10
1
                 5
Gly Val Ala Ala Asn Leu Thr Ala Ala Gly Val Pro Gly Val Ser Tyr
                                                    30
            20
                                25
Ala His Ala His Glu Ser Thr Arg Ala Met His Ala Ala Gly Val Pro
                            40
        35
Val Leu Ala Gly Thr Asp Ala Tyr Ile Gly Ser Phe Thr Arg Ala Ser
   50
                        55
                                            60
Pro Pro Tyr Gly Glu Ser Met His Asp Glu Asp Ala Tyr Ile Gly Leu
Leu Glu Arg Ala Met Pro Pro Tyr Gly Glu Ser Met His Asp Glu Leu
                85
                                    90
Ala Leu Leu Val Asp Ala Gly Leu Ser Thr Ala Glu Ala Leu Arg Ala
            100
Ala Thr Ser Thr Gly
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<210> 1123
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<212> DNA
<213> Homo sapiens
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egectecace gecettgeeg eageggggat ggtggggtge tegteegagg gggcategee
120
aagcgaatgc teccetgttg atattgeege agtgegegag geeetgeege attegetege
taaggegaag etegaceege actecaceaa egaggatgaa eacteetttt eeatgeteta
240
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ccgcgcgcaa gataaggagc aggtcagctt gctggggacg aagtatgagg ccgacggtgc
acceptctgc cccgatgacc ccaatgaggc agcgcgc
337
<210> 1124
<211> 110
<212> PRT
<213> Homo sapiens
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Met Arg Ser Leu Arg Pro Lys Met Arg Arg Arg Leu Pro Ala Phe Leu
1
Ala Leu Ala Ser Thr Ala Leu Ala Ala Ala Gly Met Val Gly Cys Ser
Ser Glu Gly Ala Ser Pro Ser Glu Cys Ser Pro Val Asp Ile Ala Ala
       35
                            40
Val Arg Glu Ala Leu Pro His Ser Leu Ala Lys Ala Lys Leu Asp Pro
                        55
                                            60
His Ser Thr Asn Glu Asp Glu His Ser Phe Ser Met Leu Tyr Arg Ala
                    70
65
Gln Asp Lys Glu Gln Val Ser Leu Leu Gly Thr Lys Tyr Glu Ala Asp
                85
                                    90
Gly Ala Pro Val Cys Pro Asp Asp Pro Asn Glu Ala Ala Arg
                                105
            100
<210> 1125
<211> 555
<212> DNA
<213> Homo sapiens
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gaagagctga cggcattgct agaacgtgtc gcgcgtaaac actaaggaga catcgggatg
120
gctgttaaaa agactactca gaaagaaggc agctcgtgga tcggggaagt tgaaaaatat
180
tcccgtaaaa tctggcttgc tggtttaggc gtgtactcga aggttagcag tgacggcggc
aaatacttcg agacgttggt caaggacggc gagaaggccg agaagttgac caagagccca
gtcggtaaaa aagtagaggc ggcaaaagcg agcgccggtt ctgcgaaatc gagcatttcg
gatacctggg gcaagttgga agagactttc gacaagcgtc tcaacagtgc tatttcgcga
420
ttgggcgtgc ccagcaaagc ggaactgaag acgctgcaca gcaaggtcga taccctgacc
aagcaaatcg aaaaactcac cggtgccaaa gtggccccgg ctaaaacggc agccgctaaa
540
cctqctqcca agctt
555
<210> 1126
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1042

<211> 146 <212> PRT

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<213> Homo sapiens
<400> 1126
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 1
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                            20
                                                                             25
                                                                                                                                 30
 Tyr Ser Lys Val Ser Ser Asp Gly Gly Lys Tyr Phe Glu Thr Leu Val
                                                                      40
                                                                                                                      45
                  35
Lys Asp Gly Glu Lys Ala Glu Lys Leu Thr Lys Ser Pro Val Gly Lys
                                                            55
                                                                                                              60
Lys Val Glu Ala Ala Lys Ala Ser Ala Gly Ser Ala Lys Ser Ser Ile
                                                 70
Ser Asp Thr Trp Gly Lys Leu Glu Glu Thr Phe Asp Lys Arg Leu Asn
                                                                                          90
Ser Ala Ile Ser Arg Leu Gly Val Pro Ser Lys Ala Glu Leu Lys Thr
                                                                             105
                            100
Leu His Ser Lys Val Asp Thr Leu Thr Lys Gln Ile Glu Lys Leu Thr
                                                                    120
                                                                                                                      125
Gly Ala Lys Val Ala Pro Ala Lys Thr Ala Ala Ala Lys Pro Ala Ala
        130
                                                        135
Lys Leu
145
<210> 1127
<211> 352
<212> DNA
<213> Homo sapiens
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teactegett eggaagtggg egtaceeggg tteacegace tggtgaagge gategagteg
180
acceptcegg acgeegegt categoracy eeggactegg etcacegora accegotgag
240
accepted accepted technique description accepted accepted
gacgeegaag egategtget eegegetgaa egggeeggeg teegteteat ga
352
<210> 1128
<211> 117
<212> PRT
<213> Homo sapiens
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Pro Asp Arg Val Leu Val Val Gly Ala Gly Val Met Gly Ala Ala His
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                                                                                         10
Ala His Ala Leu Arg Gly Ser Leu Gln Ala Val Val Cys Gly Val Val
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Asp Leu Gln Glu Arg Ala Ala Gln Ser Leu Ala Ser Glu Val Gly Val
                           40
                                               4.5
Pro Gly Phe Thr Asp Leu Val Lys Ala Ile Glu Ser Thr Ala Pro Asp
                        55
Ala Ala Val Ile Ala Thr Pro Asp Ser Ala His Arg Gln Pro Ala Glu
                                        75
                    70
Thr Ala Ile Asp Ala Gly Leu Ala Val Leu Val Glu Lys Pro Leu Ala
                                   90
               85
Thr Thr Val Asp Asp Ala Glu Ala Ile Val Leu Arg Ala Glu Arg Ala
           100
                               105
Gly Val Arg Leu Met
       115
<210> 1129
<211> 336
<212> DNA
<213> Homo sapiens
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etgecceaca ttgccgtget ccaggacgag etgecgcaac tettccagga tgacgacgte
ggggccgatg aggaagaggc agagttgcgg ggcgaacaca cgctcacaga gaagtttgtc
tgcctggatg actcctttgg ccatgactgc agcttgacct gtgatgactg caggaacgga
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tgcaatgaga cttggtcctc gggctgcatg gatatt
336
<210> 1130
<211> 112
<212> PRT
<213> Homo sapiens
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Xaa Ala Ala Leu Glu Glu Pro Met Val Asp Leu Asp Gly Glu Leu Pro
                                   10
Phe Val Arg Pro Leu Pro His Ile Ala Val Leu Gln Asp Glu Leu Pro
           20
                               25
Gln Leu Phe Gln Asp Asp Val Gly Ala Asp Glu Glu Glu Ala Glu
Leu Arg Gly Glu His Thr Leu Thr Glu Lys Phe Val Cys Leu Asp Asp
                       55
Ser Phe Gly His Asp Cys Ser Leu Thr Cys Asp Asp Cys Arg Asn Gly
                   70
                                       75
Gly Thr Cys Leu Leu Gly Leu Asp Gly Trp Asp Cys Pro Glu Gly Trp
                                   90
Thr Gly Leu Ile Cys Asn Glu Thr Trp Ser Ser Gly Cys Met Asp Ile
           100
                               105
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<211> 672
<212> DNA
<213> Homo sapiens
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quattattgt tetegteete ggtggaateg actgtgttge acceggataa ceegtatgtg
120
ctcggcccgc acgtggccgc ggccgcccag gaggcatacc tctcccctgc ggacgaagag
180
ttttacqqqt cqqcctttqc cqqqatatqc aaaacqctqa caqqccaqaa cqtactqcqa
cgtcgcggaa atcggctgtt ctggactcgt ccggaacggg ctgtcgacgc catcgacctg
300
cqatcqqcqq caggcaaagg gattgacatt atcgacqtgt ccaccqggag ggtcatcggg
gtagtcgacg aagccgccgc agaccgtacc gtgcatccag gcgcggtgta cctgcatcag
420
ggggatcagt ggctggtcga cgaatacaac ccggtcgagc accacgccct ggtgcaccag
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540
gagagacgtc gcgcttgtgg tcccggatat gtggcgtgcg ggcaggtgga actgacagag
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caagttgttg ggtatctgcg tcgcgacgaa ttcaccaatg atgtgtggta ctcgctggcc
ctcgagatgc cc
672
<210> 1132
<211> 224
<212> PRT
<213> Homo sapiens
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1
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                                                        15
Phe Glu His Pro Glu Leu Leu Phe Ser Ser Ser Val Glu Ser Thr Val
                                25
           20
Leu His Pro Asp Asn Pro Tyr Val Leu Gly Pro His Val Ala Ala Ala
                            40
                                                45
Ala Gln Glu Ala Tyr Leu Ser Pro Ala Asp Glu Glu Phe Tyr Gly Ser
   50
                        55
Ala Phe Ala Gly Ile Cys Lys Thr Leu Thr Gly Gln Asn Val Leu Arg
                                        75
Arg Arg Gly Asn Arg Leu Phe Trp Thr Arg Pro Glu Arg Ala Val Asp
                                    90
                                                        95
Ala Ile Asp Leu Arg Ser Ala Ala Gly Lys Gly Ile Asp Ile Ile Asp
           100
                                105
                                                    110
Val Ser Thr Gly Arg Val Ile Gly Val Val Asp Glu Ala Ala Ala Asp
                            120
        115
Arg Thr Val His Pro Gly Ala Val Tyr Leu His Gln Gly Asp Gln Trp
```

```
130
                       135
Leu Val Asp Glu Tyr Asn Pro Val Glu His His Ala Leu Val His Gln
                   150
                                       155
Asp Leu Pro Gly Tyr Trp Thr Gln Pro Gln Ser Ala Ser Thr Val Arg
                                    170
                                                        175
               165
Ile Leu Arg Glu Glu Arg Arg Ala Cys Gly Pro Gly Tyr Val Ala
                                185
                                                    190
Cys Gly Gln Val Glu Leu Thr Glu Gln Val Val Gly Tyr Leu Arg Arg
                                                205
       195
                           200
Asp Glu Phe Thr Asn Asp Val Trp Tyr Ser Leu Ala Leu Glu Met Pro
                        215
                                            220
<210> 1133
<211> 796
<212> DNA
<213> Homo sapiens
<400> 1133
acgcgtgaag gggggtccag cgggtgtggc actcgatgac aagacagttt gagagcggct
tgtctccggg gacctggcgt aggtctcctc tgccttaacc cttggctttt gcacttcctc
120
tqtctqtcct ccatacaaqc ttcttgcccc tagggaggac gggcttctta acagggggag
coggttootg tootaacccc actggcatot tacactotgg gagatagott coccotgaga
ggcgagtgag ccacgtaagg ggaggtgggc gatggcttcc cttctgtctt gggttggggg
300
agtcaggtac agtatttttt cttttaaagc atcattgatc acataataag gtttgtcata
gtccttaatc acagacctgt gaaatttgga gaattcacgg cacctaggat gggagtgagc
ttctgattgt gagctgattt gggagctaac ctcaaggaaa ctcctcttgc aagccccctg
ctgggtgtcg gggccttcgc cagggacctc ccggggactc tggacgctct ttgtctgccc
540
ttccttttcc ctcacctcqc tcccccqtga qaaagtgggg ctcatgcagc tcagctcagt
gacagagggt ttattagggg tagctctggg acccatcttt tggtgatttc ttctctctct
ttetetaatg gaataattgt ttetgtetac acttetttat ttteteetet etacagetge
720
cttctaaaaa tgtgcttttc tgttcctgca gaactgaagc ttgcatggcc tttgttgtga
780
ctttcccttc acgcgt
796
<210> 1134
<211> 147
<212> PRT
<213> Homo sapiens
<400> 1134
Met Gly Pro Arg Ala Thr Pro Asn Lys Pro Ser Val Thr Glu Leu Ser
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5
                                   10
Cys Met Ser Pro Thr Phe Ser Arg Gly Ser Glu Val Arg Glu Lys Glu
          20
                              25
Gly Gln Thr Lys Ser Val Gln Ser Pro Arg Glu Val Pro Gly Glu Gly
                          40
                                               45
Pro Asp Thr Gln Gln Gly Ala Cys Lys Arg Ser Phe Leu Glu Val Ser
                      55
                                         60
  50
Ser Gln Ile Ser Ser Gln Ser Glu Ala His Ser His Pro Arg Cys Arg
                   70
                                       75
Glu Phe Ser Lys Phe His Arg Ser Val Ile Lys Asp Tyr Asp Lys Pro
                                  90
              85
Tyr Tyr Val Ile Asn Asp Ala Leu Lys Glu Lys Ile Leu Tyr Leu Thr
                               105
                                                   110
Pro Pro Thr Gln Asp Arg Arg Glu Ala Ile Ala His Leu Pro Leu Arg
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                                              125
       115
Gly Ser Leu Ala Ser Gln Gly Glu Ala Ile Ser Gln Ser Val Arg Cys
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Gln Trp Gly
145
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gegaccegte tgeeteecce cagegacetg gtgaaatatg cagagaactg catgtacact
cccqtctacc gcaactaccq gtagtgctgc ggggatcaat tttgcagtaa taaaaaatct
actatcaacg cggatggtac tctgttgttt atagtccctg ctgctaacca cccttgttgc
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gttgtgaaag caaact
376
<210> 1136
<211> 67
<212> PRT
<213> Homo sapiens
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Asp Gln Ala Thr Gln Asp Asn Phe Glu Lys Gly Ser Ile Phe Pro Pro
                                  10
Phe Thr Ser Ile Arg Lys Ile Ser Ala His Ile Ala Ala Ala Val Ala
           20
                               25
                                                  30
Ala Lys Ala Tyr Glu Leu Gly Leu Ala Thr Arg Leu Pro Pro Pro Ser
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                           40
Asp Leu Val Lys Tyr Ala Glu Asn Cys Met Tyr Thr Pro Val Tyr Arg
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60
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Asn Tyr Arg
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<211> 357
<212> DNA
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actgtcgcca agggcggcca gattcttttc gtcggcacga agaagcaggc ccaggagtcc
atogttgage aggecacteg cgttggcatg ccctatgtca accagegttg gcttggggga
atgeteacta atttecagae catetegaag egeattgeee ggeteaagga getegaggee
300
atggaetttg acaaggttte eggeteeggt eteaccaaga aggagetget tatgete
357
<210> 1138
<211> 119
<212> PRT
<213> Homo sapiens
<400> 1138
Thr Arg Arg Trp Asn Pro Lys Met Lys Arg Phe Ile Phe Thr Glu Arg
                                    10
Asn Gly Ile Tyr Ile Ile Asp Leu His Gln Ser Leu Thr Tyr Ile Asp
                               25
Lys Ala Tyr Ala Phe Val Lys Glu Thr Val Ala Lys Gly Gln Ile
        35
                           40
                                               45
Leu Phe Val Gly Thr Lys Lys Gln Ala Gln Glu Ser Ile Val Glu Gln
                        55
                                           60
Ala Thr Arg Val Gly Met Pro Tyr Val Asn Gln Arg Trp Leu Gly Gly
                                       75
                   70
Met Leu Thr Asn Phe Gln Thr Ile Ser Lys Arg Ile Ala Arg Leu Lys
               85
                                   90
Glu Leu Glu Ala Met Asp Phe Asp Lys Val Ser Gly Ser Gly Leu Thr
           100
                               105
Lys Lys Glu Leu Leu Met Leu
       115
<210> 1139
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<212> DNA
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<400> 1139
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ccaatcccgt aggacccgtc tcgtccagca tcgaccaagg cgctgttgag gcgttcggct
 teggtaatga actegatgeg etcaatatee aegggggtag egaaategta gatettggee
 agactgaggc cttggaggag cgcggccgtc ggggggacgt ggcctgcggc cgggcgttcc
 240
 ttgctctcaa ggacttcgtc gtcgcggctg acaaggaata cgtttgtgtg gtcgcctgca
 300
 atgcatgctc gagcgtggtg accatcgagg tgaaggacgg tttcggcata gaggtcatcg
 360
 tecacategg ccacagtgag ttegacgact cetgagtega etagatgacg egeettetet
geogegtett egetgaegte ggeoaggaee getage
456
<210> 1140
<211> 122
<212> PRT
<213> Homo sapiens
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Met Trp Thr Met Thr Ser Met Pro Lys Pro Ser Phe Thr Ser Met Val
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Thr Thr Leu Glu His Ala Leu Gln Ala Thr Thr Gln Thr Tyr Ser Leu
            20
                                 25
                                                     30
Ser Ala Ala Thr Thr Lys Ser Leu Arg Ala Arg Asn Ala Arg Pro Gln
        35
                            40
Ala Thr Ser Pro Arg Arg Pro Arg Ser Ser Lys Ala Ser Val Trp Pro
    50
                        55
                                             60
Arg Ser Thr Ile Ser Leu Pro Pro Trp Ile Leu Ser Ala Ser Ser Ser
                    70
                                        75
Leu Pro Lys Pro Asn Ala Ser Thr Ala Pro Trp Ser Met Leu Asp Glu
                85
Thr Gly Pro Thr Gly Leu Val Lys Val Pro Pro Tyr Ser Asp Arg Ser
            100
                                105
                                                     110
Ser Ala Ala Trp Pro Gln Thr Thr Cys Ala
        115
                            120
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<211> 354
<212> DNA
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120
ccgaccggca ttctgggccg tccggaggtt gagaaagtat gagcagatat cttaaatcgg
cgtttttcag cgccctgttg gtgtgggccg tggcctttcc ggtactcggc ctcaagctga
240
gcattgtcgg gatcaaccac gaagtgcatg gcaccggtcc cgtgaccttg accatcatcg
300
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ccctgtgctc ggtgccgatg ttcctgcgcg tgctgtttac ccagcaagtc ggtg
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<212> PRT
<213> Homo sapiens
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Gly Ala Met Leu Gly Gly Leu Val Leu Gly Val Ala Glu Ala Phe Gly
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Ala Asp Ile Phe Gly Asp Gln Tyr Lys Asp Val Val Ala Phe Gly Leu
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                                                    30
Leu Val Leu Val Leu Leu Phe Arg Pro Thr Gly Ile Leu Gly Arg Pro
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Glu Val Glu Lys Val
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<210> 1143
<211> 353
<212> DNA
<213> Homo sapiens
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cgcagecgae gacacagcaa gegeaggege gaccaaccga gggtggetea acagegeege
attogaaato ctggcccacg tggccgtcaa tgcccaacac tacgcgctct ccgagagacc
ggcgctggag gagttcgcca agagcttcca gccgcgcaac aaccaggact acgtggccgc
gatcgccaag aaggccgcga accacaccat gcatcccggc aggcagtcga ttt
<210> 1144
<211> 102
<212> PRT
<213> Homo sapiens
<400> 1144
Met His Gly Val Val Arg Gly Leu Leu Gly Asp Arg Gly His Val Val
                                    10
Leu Val Val Ala Arg Leu Glu Ala Leu Gly Glu Leu Leu Gln Arg Arg
Ser Leu Gly Glu Arg Val Val Leu Gly Ile Asp Gly His Val Gly Gln
                                                45
                            40
Asp Phe Glu Cys Gly Ala Val Glu Pro Pro Ser Val Gly Arg Ala Cys
                        55
                                            60
Ala Cys Cys Val Val Gly Cys Ala Asp Glu His Arg Leu Gly Leu Cys
65
                    70
Leu Asp Arg Phe Glu Leu His Phe Thr Leu His Gly Ile Ser Arg Ser
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90
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                85
Met Arg Gln Cys Arg Gly
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<210> 1145
<211> 360
<212> DNA
<213> Homo sapiens
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catgaagtgg ccggcacctg ggtactcggg ctgtcggcgg cgatggctct gatggtgttt
ttctacgtcc aggtcatcgc caagaagatc aatcctcgac cctccgacga gaaggacgcc
gaggtgateg acggggctgg tecggteggt ttettecege cacagagtat etggccgtte
240
tggtgcgcgc tcgttgtcgc catcatgtgc ctcggcccga tcttcggctg gtggatctct
ctgctcgggc tgggcattgt tatctgggcc gcctcgggtt gggcttttga gtactaccgc
360
<210> 1146
<211> 120
<212> PRT
<213> Homo sapiens
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Val Phe Gly Gly Leu Gly Leu Phe Tyr Cys Val Met Thr Pro Val Tyr
                                    10
Trp Phe Ser Ala His Glu Val Ala Gly Thr Trp Val Leu Gly Leu Ser
                                25
           20
Ala Ala Met Ala Leu Met Val Phe Phe Tyr Val Gln Val Ile Ala Lys
                                                45
                            40
Lys Ile Asn Pro Arg Pro Ser Asp Glu Lys Asp Ala Glu Val Ile Asp
                                            60
                       55
   50
Gly Ala Gly Pro Val Gly Phe Phe Pro Pro Gln Ser Ile Trp Pro Phe
                                        75
                    70
Trp Cys Ala Leu Val Val Ala Ile Met Cys Leu Gly Pro Ile Phe Gly
                85
                                    90
                                                        95
Trp Trp Ile Ser Leu Leu Gly Leu Gly Ile Val Ile Trp Ala Ala Ser
                                105
           100
Gly Trp Ala Phe Glu Tyr Tyr Arg
       115
<210> 1147
<211> 409
<212> DNA
<213> Homo sapiens
<400> 1147
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gccaaaaagg catccacctt cttcatcaat ccagaattga tcatgctcat gcctgtgggt
ggatcactat gtgctctcca aattgggagg ggaagtctac tctcctctct cctctctc
180
ccaccttccc ctctctctc tctcctttct attcccaggg cagtggaaca tgatgaggtt
240
cttttccctt catggatatc ctctttctgc cctccacata aaggggcatt gatggatctt
caagaatggg atgcctttcc ctagaaaggc taaatattca tgaggctgaa tgtgaggatc
cagagtacac tgaaatataa ctggtcatca gtacacatag aatctgatn
409
<210> 1148
<211> 103
<212> PRT
<213> Homo sapiens
<400> 1148
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                 5
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Ala Lys Lys Ala Ser Thr Phe Phe Ile Asn Pro Glu Leu Ile Met Leu
                                25
                                                    30
            20
Met Pro Val Gly Gly Ser Leu Cys Ala Leu Gln Ile Gly Arg Gly Ser
                                                45
                            40
        35
Leu Leu Ser Ser Leu Leu Ser Leu Pro Pro Ser Pro Leu Ser Ser Leu
                        55
                                            60
Leu Ser Ile Pro Arg Ala Val Glu His Asp Glu Val Leu Phe Pro Ser
                                        75
                    70
Trp Ile Ser Ser Phe Cys Pro Pro His Lys Gly Ala Leu Met Asp Leu
                85
                                    90
                                                        95
Gln Glu Trp Asp Ala Phe Pro
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<210> 1149
<211> 309
<212> DNA
<213> Homo sapiens
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cgtgaggcgg tatcgcagat cattaccttc ggtaccatgg cggcgaaagc ggttattcgt
gacgtgggcc gtgtactggg tcacccgtat ggcttcgtcg atcgcatctc caagctggtg
ccgcccgatc cgggcatgac gctggaaaaa gcctttgccg ccgaaccgca gttgccggaa
atctacgagg ccgatgagga agtcaaagcg ctgatcgaca tggcgcgcaa gctgggaagg
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gtgacgcgg
309
<210> 1150
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<211> 103
<212> PRT
<213> Homo sapiens
<400> 1150
Val Asp Phe Cys Met Glu Lys Arg Asp Leu Val Ile Glu His Val Ala
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Glu Met Tyr Gly Arg Glu Ala Val Ser Gln Ile Ile Thr Phe Gly Thr
           20
                               25
Met Ala Ala Lys Ala Val Ile Arg Asp Val Gly Arg Val Leu Gly His
                                               45
                           40
Pro Tyr Gly Phe Val Asp Arg Ile Ser Lys Leu Val Pro Pro Asp Pro
                                           60
 50
                       55
Gly Met Thr Leu Glu Lys Ala Phe Ala Ala Glu Pro Gln Leu Pro Glu
                   70
                                       75
Ile Tyr Glu Ala Asp Glu Glu Val Lys Ala Leu Ile Asp Met Ala Arg
                                   90
              85
Lys Leu Gly Arg Val Thr Arg
           100
<210> 1151
<211> 360
<212> DNA
<213> Homo sapiens
<400> 1151
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gegetcaata cettegeete gtaccaaact gaggtcatte acgtegacat ggacgacage
gggttggttc cggaatccct gcgtgagaaa gtgactgcag cgcgtcaaga cggcaagtcg
qtqaaqttcc tttacacggt tcctaactac tcgaacccgt cgggaatctc gcaatccacc
gagcgtcgcc gggagatcct agcggtggct gacgagctgg atctgttggt ggttgaggac
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<210> 1152
<211> 120
<212> PRT
<213> Homo sapiens
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Ala Arg Ile Phe Cys Asn Pro Ser Asp Val Ile Met Ala Glu Ser Pro
Ala Tyr Val Gly Ala Leu Asn Thr Phe Ala Ser Tyr Gln Thr Glu Val
           20
                               25
Ile His Val Asp Met Asp Asp Ser Gly Leu Val Pro Glu Ser Leu Arg
                          40
      35
Glu Lys Val Thr Ala Ala Arg Gln Asp Gly Lys Ser Val Lys Phe Leu
                                          60
                      55
   50
Tyr Thr Val Pro Asn Tyr Ser Asn Pro Ser Gly Ile Ser Gln Ser Thr
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75
                    70
Glu Arg Arg Arg Glu Ile Leu Ala Val Ala Asp Glu Leu Asp Leu Leu
                                  90
               85
Val Val Glu Asp Asn Pro Tyr Gly Leu Leu Asn Leu Asp Gly Asp Pro
                              105
          100
Leu Pro Thr Leu Lys Ser Met Asp
       115
<210> 1153
<211> 416
<212> DNA
<213> Homo sapiens
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cgtgacetca tcaageggat ggaaaagtae eteecegaga teggteagtt etgeaatgag
aatccgatct ttaaggcccg cactcagggc attggttacg ctgatctgtc tacctgtatg
geeetgggag ttaetggtee tgetetgege getaeeggee tgeegtggga eetgegeaag
accoagecet attgegatta egacacgtat gaettegaeg tegecacetg ggatacetgt
gactgttacg ggcgtttccg catccgcctg gaagagatgg accagtcggt gcgcattctc
aagcaatgcc tcaaacgcct cgaggacacc cagggtgacc gtaatatggt cgagga
416
<210> 1154
<211> 138
<212> PRT
<213> Homo sapiens
<400> 1154
Ala Trp Ile Arg Pro Gly Gly Val Ala Thr Asp Leu Pro Glu Thr Gly
                                   10
Leu Asp Gln Leu Arg Asp Leu Ile Lys Arg Met Glu Lys Tyr Leu Pro
                               25
Glu Ile Gly Gln Phe Cys Asn Glu Asn Pro Ile Phe Lys Ala Arg Thr
                                              45
       35
                           40
Gln Gly Ile Gly Tyr Ala Asp Leu Ser Thr Cys Met Ala Leu Gly Val
                                           60
Thr Gly Pro Ala Leu Arg Ala Thr Gly Leu Pro Trp Asp Leu Arg Lys
                   70
                                       75
Thr Gln Pro Tyr Cys Asp Tyr Asp Thr Tyr Asp Phe Asp Val Ala Thr
                                   90
Trp Asp Thr Cys Asp Cys Tyr Gly Arg Phe Arg Ile Arg Leu Glu Glu
          100
                               105
Met Asp Gln Ser Val Arg Ile Leu Lys Gln Cys Leu Lys Arg Leu Glu
                           120
Asp Thr Gln Gly Asp Arg Asn Met Val Glu
                       135
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<210> 1155
<211> 339
<212> DNA
<213> Homo sapiens
<400> 1155
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120
acatcacgca ggactggggg ttttggggaa acagctcact ttagagcagt gcagtgtaga
gettteegte ttetaceagg gtecacettt aacaetgttt atetgaaaat ttteeecetg
240
gettactege ttgcagetge ccaetttgca gaaagatgge getetgatet etacgetece
tgttccttca gggactccat agtattttt ttcacgcgt
339
<210> 1156
<211> 91
<212> PRT
<213> Homo sapiens
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Met Gly Arg Phe Ser Ala Leu Ser Arg Lys Thr Ala Val Lys Met Ala
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Thr Lys Thr Ser Arg Arg Thr Gly Gly Phe Gly Glu Thr Ala His Phe
            20
                                25
Arg Ala Val Gln Cys Arg Ala Phe Arg Leu Leu Pro Gly Ser Thr Phe
        35
                            40
Asn Thr Val Tyr Leu Lys Ile Phe Pro Leu Ala Tyr Ser Leu Ala Ala
                                            60
                        55
Ala His Phe Ala Glu Arg Trp Arg Ser Asp Leu Tyr Ala Pro Cys Ser
                    70
                                        75
                                                            80
Phe Arg Asp Ser Ile Val Phe Phe Phe Thr Arg
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<210> 1157
<211> 426
<212> DNA
<213> Homo sapiens
<400> 1157
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ctggcaaaac tcgtgacccg acacctgagg gcctatcggt tgcacgttgc cgtcatcatc
120
gttatgcagg tttgcgccca aatcgcggcc ctgaccttgc caaccatcaa cgcagacatc
atcaacaagg gegtegtgac ageggatace ggatatgtea ceaeceacte cetetteatg
240
ctggcggtcg ctttagggca ggccatctgc caggtcattg cggtttatct cgccgctcag
300
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gtggcgatgg gaatgggccg tgacgttcgc gacgccatct tcacccgcac ccttgacttc
360
teggeceggg agateaacaa atteggagea ecateactea ttacceggae taccaacgae
420
gtccag
426
<210> 1158
<211> 123
<212> PRT
<213> Homo sapiens
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Val Leu Ala Lys Leu Val Thr Arg His Leu Arg Ala Tyr Arg Leu His
                                    10
Val Ala Val Ile Ile Val Met Gln Val Cys Ala Gln Ile Ala Ala Leu
            20
Thr Leu Pro Thr Ile Asn Ala Asp Ile Ile Asn Lys Gly Val Val Thr
                            40
Ala Asp Thr Gly Tyr Val Thr Thr His Ser Leu Phe Met Leu Ala Val
   50
                        55
Ala Leu Gly Gln Ala Ile Cys Gln Val Ile Ala Val Tyr Leu Ala Ala
                                        75
65
                    70
Gln Val Ala Met Gly Met Gly Arg Asp Val Arg Asp Ala Ile Phe Thr
                                    90
                85
Arg Thr Leu Asp Phe Ser Ala Arg Glu Ile Asn Lys Phe Gly Ala Pro
                                105
            100
Ser Leu Ile Thr Arg Thr Thr Asn Asp Val Gln
                            120
<210> 1159
<211> 434
<212> DNA
<213> Homo sapiens
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120
gttttcctcg agaagcctgc gcagcatctc cgagagggcg cctggagcga gcatggagag
180
gccatccgca gaggagcgcg tgctcgtacg ggacttccag cgcctgcttg gtgtggctgt
ccgccaggac cccaccttgt ctccgtttgt ctgcaagagc tgccacgccc agttctacca
gtgccacage ettetcaagt cetteetgca gagggtcaac geeteeegg etggtegeeg
gaageettgt geaaaggteg gtgeeeagee eecaacaggg geagaggagg gagegtgtet
420
ggtggatctg atca
434
<210> 1160
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<211> 114
<212> PRT
<213> Homo sapiens
<400> 1160
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1
                                    10
Arg Ser Ile Ser Glu Arg Ala Pro Gly Ala Ser Met Glu Arg Pro Ser
            20
                                25
                                                    30
Ala Glu Glu Arg Val Leu Val Arg Asp Phe Gln Arg Leu Leu Gly Val
                                                45
                            40
Ala Val Arg Gln Asp Pro Thr Leu Ser Pro Phe Val Cys Lys Ser Cys
                                            60
His Ala Gln Phe Tyr Gln Cys His Ser Leu Leu Lys Ser Phe Leu Gln
                    70
                                        75
Arg Val Asn Ala Ser Pro Ala Gly Arg Arg Lys Pro Cys Ala Lys Val
Gly Ala Gln Pro Pro Thr Gly Ala Glu Glu Gly Ala Cys Leu Val Asp
                               105
            100
Leu Ile
<210> 1161
<211> 355
<212> DNA
<213> Homo sapiens
<400> 1161
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acagagggat ggggagcage ceteagtgce agetecaaca ggeceactge aggteetgte
actgcaccca aggagetgce ttecatttea cetgacattt ccactaaggg eccagegttt
atcattccag aagagcagca ggcagaacct tcacctccca agagctgcaa gtgcgctgtg
gcaggaaaag aagatetgge gtetgaagte ageteetget etecaggaaa agagggaega
tgacatagga cttgagcaaa atgagagccc cgtgatggga gagaacacct gatca
355
<210> 1162
<211> 102
<212> PRT
<213> Homo sapiens
<400> 1162
Met Gln Pro Ile His Pro Gln Arg Asp Gly Glu Gln Pro Ser Val Pro
                                   10
Ala Pro Thr Gly Pro Leu Gln Val Leu Ser Leu His Pro Arg Ser Cys
            20
                                                    30
                                25
Leu Pro Phe His Leu Thr Phe Pro Leu Arg Ala Gln Arg Leu Ser Phe
        35
                           40
                                               45
Gln Lys Ser Ser Arg Gln Asn Leu His Leu Pro Arg Ala Ala Ser Ala
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```
60
Leu Trp Gln Glu Lys Lys Ile Trp Arg Leu Lys Ser Ala Pro Ala Leu
                                       75
                    70
Gln Glu Lys Arg Asp Asp Ile Gly Leu Glu Gln Asn Glu Ser Pro
                85
Val Met Gly Glu Asn Thr
            100
<210> 1163
<211> 466
<212> DNA
<213> Homo sapiens
<400> 1163
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aggagtcaaa gagaaggcag aactatggca ggaaagctcc ggaagtccca catccctgga
gtgagcatct ggcagctggt ggaggagatc cctgaaggct gcagcacgcc ggactttgag
cagaagcccg tcacctcggc tctgccagag gggaaaaatg ctgtctttcg ggctgtggtc
tgtggggagc ccaggcccga ggtgcgttgg cagaactcca aaggtgacct cagtgattcc
aqcaaqtaca aqatctcctc caqccctqgc aqcaaggagc acgtgctgca gatcaacaag
360
ctgacaggeg aggacaegga tetgtaceae tgeacageag taaatgegta eggagaggee
420
gettgetcag tgagactcae egtcategaa gttggettte ggaaga
466
<210> 1164
<211> 127
<212> PRT
<213> Homo sapiens
<400> 1164
Met Ala Gly Lys Leu Arg Lys Ser His Ile Pro Gly Val Ser Ile Trp
                                    10
                5
Gln Leu Val Glu Glu Ile Pro Glu Gly Cys Ser Thr Pro Asp Phe Glu
                                                    3.0
            20
                                25
Gln Lys Pro Val Thr Ser Ala Leu Pro Glu Gly Lys Asn Ala Val Phe
                            40
       35
Arg Ala Val Val Cys Gly Glu Pro Arg Pro Glu Val Arg Trp Gln Asn
                        55
                                            60
Ser Lys Gly Asp Leu Ser Asp Ser Ser Lys Tyr Lys Ile Ser Ser Ser
Pro Gly Ser Lys Glu His Val Leu Gln Ile Asn Lys Leu Thr Gly Glu
                                    90
Asp Thr Asp Leu Tyr His Cys Thr Ala Val Asn Ala Tyr Gly Glu Ala
                                                    110
                                105
           100
Ala Cys Ser Val Arg Leu Thr Val Ile Glu Val Gly Phe Arg Lys
                            120
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<211> 414
<212> DNA
<213> Homo sapiens
<400> 1165
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tgetttagta aagteettgt tgageegegt etgeteaage teaaettgae nattatgtgt
ctgcacattc tgctgatgtc cacgttcgtg gccctgcccg gtcagttggc tgcagcagga
ttccccgccg ctgaacactg gaaagtgtat ctggtgacga tgctcatctc cttcgtctcc
gttgtccctt tcattatcta tgcagaagtg aaacgccgca tgaagcgcgt attcctgacg
300
tgtgttgcgc tgctgttgat tgccgaaatc gtactatggg gctccggtcc acacttctgg
gaactggtca tcggcgtaca gcttttcttc ctcgccttta atctcatgga agcc
<210> 1166
<211> 138
<212> PRT
<213> Homo sapiens
<400> 1166
Trp Val Val Pro Asp Thr Xaa Asn His Val Leu Asn Arg Ile Ser Gly
                                    10
Met Val Lys Gly Cys Phe Ser Lys Val Leu Val Glu Pro Arg Leu Leu
           20
                                25
                                                   30
Lys Leu Asn Leu Thr Ile Met Cys Leu His Ile Leu Leu Met Ser Thr
       35
                           40
Phe Val Ala Leu Pro Gly Gln Leu Ala Ala Ala Gly Phe Pro Ala Ala
                       55
                                           60
Glu His Trp Lys Val Tyr Leu Val Thr Met Leu Ile Ser Phe Val Ser
                                        75
65
                    70
Val Val Pro Phe Ile Ile Tyr Ala Glu Val Lys Arg Arg Met Lys Arg
                                    90
               85
Val Phe Leu Thr Cys Val Ala Leu Leu Leu Ile Ala Glu Ile Val Leu
           100
                               105
                                                   110
Trp Gly Ser Gly Pro His Phe Trp Glu Leu Val Ile Gly Val Gln Leu
       115
                           120
Phe Phe Leu Ala Phe Asn Leu Met Glu Ala
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<212> DNA
<213> Homo sapiens
<400> 1167
gtcgaccccg tgggcaagag tcgcggcccc tgacgataac ttcaccccgc cggccttgag
60
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120
tagccgggtg acctgcctga ccatcttcgg caaaccagtg cgcagttgtg tggtgaactc
180
attgaccct cgagacagtc gtgaggaacc gtcagcaagt tcgtcgatgc cgtcgtcgat
getettgeca gagtteggat cettgatege categeettg aeggeeacce eegaceeage
300
ccgcacgccc agggcgtacc catcggtcat cgcgtcgcgg acgatgggta ccaggtcgtg
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cagggettee ttactaagtt cegeggtttt ettteeegae gegt
464
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Met Thr Asp Gly Tyr Ala Leu Gly Val Arg Ala Gly Ser Gly Val Ala
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Val Lys Ala Met Ala Ile Lys Asp Pro Asn Ser Gly Lys Ser Ile Asp
                                25
Asp Gly Ile Asp Glu Leu Ala Asp Gly Ser Ser Arg Leu Ser Arg Gly
       35
                            40
Val Asn Glu Phe Thr Thr Gln Leu Arg Thr Gly Leu Pro Lys Met Val
Arg Gln Val Thr Arg Leu His Glu Gly Ile His Gln Ala Ala Thr Gly
                                        75
                    70
Ala Gln Ala Leu Ala Ser Arg Ser Gln Gln Leu Lys Ala Gly Gly Val
                                    90
Lys Leu Ser Ser Gly Ala Ala Thr Leu Ala His Gly Val Asp
            100
                                105
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tctgcctgga tggtccgaag ttggtctcta ggaacgagcc ctttggaagt gctggcagag
agggaaagta tttacaggtt gctgcctcag accacccctg agaatgtgag taagaacttc
240
agccaqtaca gtatcgaccc tgtcactcgg tatcccaata tcaacgtcaa cttcctccgg
ccaagccagg tgcgccattt atatgatact ggcgaaacaa aagatattca cctggaaatg
360
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gagageetgg tgaatteeeg aaccaccec aaattgaete geaatgagte tgtagetegt
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tcaagcaaac tgctgggttg gtgccagagg cagacagatg gctatgcagg ggtaaacgtg
480
acagat
486
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<211> 159
<212> PRT
<213> Homo sapiens
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Arg Glu Gln Asn Gly His Gln Leu Leu Val Ala Leu Val Gly Asp Ser
                                  10
                                                      15
Leu Leu Glu Pro Phe Trp Pro Met Gly Thr Gly Ile Ala Arg Gly Phe
                              25
           20
Leu Ala Ala Met Asp Ser Ala Trp Met Val Arg Ser Trp Ser Leu Gly
       35
                           40
                                              45
Thr Ser Pro Leu Glu Val Leu Ala Glu Arg Glu Ser Ile Tyr Arg Leu
                                          60
   50
                      55
Leu Pro Gln Thr Thr Pro Glu Asn Val Ser Lys Asn Phe Ser Gln Tyr
                                      75
65
Ser Ile Asp Pro Val Thr Arg Tyr Pro Asn Ile Asn Val Asn Phe Leu
               85
                                  90
Arg Pro Ser Gln Val Arg His Leu Tyr Asp Thr Gly Glu Thr Lys Asp
                              105
                                                  110
           100
Ile His Leu Glu Met Glu Ser Leu Val Asn Ser Arg Thr Thr Pro Lys
                                              125
       115
                          120
Leu Thr Arg Asn Glu Ser Val Ala Arg Ser Ser Lys Leu Leu Gly Trp
                      135
                                          140
Cys Gln Arg Gln Thr Asp Gly Tyr Ala Gly Val Asn Val Thr Asp
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145
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<212> DNA
<213> Homo sapiens
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ggcagcgcca ggtgctggcg ctgcccgagg ccccgtgcca agtggggccc atagcagccg
120
actogotaga cootoccaaa acgoacacca egogogacca ggaccgagag gcccgcacgg
ccctgctagg ccacaaacac tccactgtct ccagggtaaa agacaaacac agcctcgctt
240
gtccctccaa gagtacaacc tctgtctgat gaaaaacaaa cgacccagag aggaggcagc
300
tgccgggaca ctgcaggctg ggcccgccgc gcccttggag ggcaggtcaa aatcccggaa
420
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429
<210> 1172
<211> 118
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<213> Homo sapiens
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Met Gln Trp Glu Pro Arg Ala Gly Ser Ala Glu Ala Ala Pro Gly Ala
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Gly Ala Ala Arg Gly Pro Val Pro Ser Gly Ala His Ser Ser Arg Leu
Ala Arg Pro Ser Gln Asn Ala His His Ala Arg Pro Gly Pro Arg Gly
                                                45
       35
                            40
Pro His Gly Pro Ala Arg Pro Gln Thr Leu His Cys Leu Gln Gly Lys
                                            60
Arg Gln Thr Gln Pro Arg Leu Ser Leu Gln Glu Tyr Asn Leu Cys Leu
                                        75
65
                    70
Met Lys Asn Lys Arg Pro Arg Glu Glu Ala Ala Gly Thr Leu Gln
                                    90
Ala Gly Pro Ala Ala Pro Leu Glu Gly Arg Ser Lys Ser Arg Asn Arg
                                105
           100
His Ser Val Gln Ala Asp
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<210> 1173
<211> 435
<212> DNA
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tactatgacg cctactacgg ctcggctcag aaagtccgta ccctcatcca acgcgacttc
gagaaagcat ggcagatgtg cgatgtgctc gtgtcaccgg ccacgccaac gactgccttc
eggetgggtg agegtactge tgaccegatg gegatgtace geteegatet atgeaeggte
ccggccaata tggccggaag tcccgcagga tctttcccga tcggtctatc agagaccgac
ggcatgcccg tcggcatgca ggtgatggcg ccaatcatgg cggacgatcg aatctaccga
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435
<210> 1174
<211> 145
<212> PRT
<213> Homo sapiens
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Arg Val Asn Asp Asp Gly Glu His Ser Ala Glu Gln Val Met Arg Ala
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Thr Arg Gly Ala Gly Leu Gly Ala Glu Ala Lys Arg Arg Ile Ile Leu
            20
                                25
                                                     30
Gly Thr Tyr Ala Leu Ser Ala Gly Tyr Tyr Asp Ala Tyr Tyr Gly Ser
                            40
                                                45
Ala Gln Lys Val Arg Thr Leu Ile Gln Arg Asp Phe Glu Lys Ala Trp
                                            60
   50
                        55
Gln Met Cys Asp Val Leu Val Ser Pro Ala Thr Pro Thr Thr Ala Phe
                    70
                                        75
Arg Leu Gly Glu Arg Thr Ala Asp Pro Met Ala Met Tyr Arg Ser Asp
                85
                                    90
Leu Cys Thr Val Pro Ala Asn Met Ala Gly Ser Pro Ala Gly Ser Phe
            100
                                105
Pro Ile Gly Leu Ser Glu Thr Asp Gly Met Pro Val Gly Met Gln Val
                            120
                                                125
Met Ala Pro Ile Met Ala Asp Asp Arg Ile Tyr Arg Val Gly Ala Ala
   130
                        135
Leu
145
<210> 1175
<211>. 729
<212> DNA
<213> Homo sapiens
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caggggttct ttccaaagtt acagtccgat gtcttggcaa caggaccaac cagtaacaat
cgctgggtaa gtcggagtgc cactgcacag cgcaggaaag gacgccttcg ccagcattct
gagcatgttg ggctggacaa cgacttgagg gagaaatata tgcaagaggc acgaagttta
240
qqaaaaaacc tqaggcaacc caaactgtca gacctctctc ctgcagttat tgcacagacc
aactgtaaat tcgtagaagg cttattaaaa gaatgtagaa ataagacaaa gcgcatgttg
gtggagaaga tgggacatga agcggtggaa cttggccatg gagaagcaaa catcaccggc
420
ctggaggaga acaccttgat cgccagcctt tgtgacctgc tggagaggat atggagccat
ggcttgcagg tcaagcaggg gaagtcggtt ttgtggtcac atttaattcc ttttcaggac
540
agagaagaga accaagagcc ccttgcagaa tcaccagttg ccctcggacc agaaagaaaa
aaatctgact caggagttat gttgccaacg ctcagggtct ctcttattca ggacatgagg
660
catattcaaa acatgagtga gatcaagact gatgttggac gagctcgggc gtggataaga
ctgtctcta
729
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<210> 1176
<211> 243
<212> PRT
<213> Homo sapiens
<400> 1176
Asp Arg Thr Ala Ile His Pro His Leu Leu Asp Met Lys Ile Gly Gln
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                                 10
1
Gly Lys Tyr Glu Gln Gly Phe Phe Pro Lys Leu Gln Ser Asp Val Leu
                              25
         20
Ala Thr Gly Pro Thr Ser Asn Asn Arg Trp Val Ser Arg Ser Ala Thr
                          40
                                             45
Ala Gln Arg Arg Lys Gly Arg Leu Arg Gln His Ser Glu His Val Gly
                      55
Leu Asp Asn Asp Leu Arg Glu Lys Tyr Met Gln Glu Ala Arg Ser Leu
                                      75
Gly Lys Asn Leu Arg Gln Pro Lys Leu Ser Asp Leu Ser Pro Ala Val
                                 90
Ile Ala Gln Thr Asn Cys Lys Phe Val Glu Gly Leu Leu Lys Glu Cys
          100
                    105
                                         110
Arg Asn Lys Thr Lys Arg Met Leu Val Glu Lys Met Gly His Glu Ala
      115
                          120
                                             125
Val Glu Leu Gly His Gly Glu Ala Asn Ile Thr Gly Leu Glu Glu Asn
                                       140
                      135
Thr Leu Ile Ala Ser Leu Cys Asp Leu Leu Glu Arg Ile Trp Ser His
                 150
                                      155
Gly Leu Gln Val Lys Gln Gly Lys Ser Val Leu Trp Ser His Leu Ile
              165
                                 170
Pro Phe Gln Asp Arg Glu Glu Asn Gln Glu Pro Leu Ala Glu Ser Pro
                              185
                                                190
          180
Val Ala Leu Gly Pro Glu Arg Lys Lys Ser Asp Ser Gly Val Met Leu
                         200
                                             205
      195
Pro Thr Leu Arg Val Ser Leu Ile Gln Asp Met Arg His Ile Gln Asn
                     215
                                         220
Met Ser Glu Ile Lys Thr Asp Val Gly Arg Ala Arg Ala Trp Ile Arg
                  230
225
Leu Ser Leu
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<211> 581
<212> DNA
<213> Homo sapiens
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cgtcgcacag ctgcgagagg tgggcattgc cgagtgaggc aacgatgtct aaggcggaaa
gctcatcctc ggcagacggg aagactttgt cgtcggggat gttgtcaatg agagcgggga
180
egtegatete ggtaetgeee atggegteat gaaggatege gegataeggg gegacgaeee
240
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cgatgagggc gtcgtcgaat ccagcgatga tcgatacctc tctcggtagc acgtccgtgg
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tggctgccag gaggcggatg gccggttctg gggcatcttt ggagatcttc agccggacat
cagtgggcag tccggccggg acttggcaga gggcctgggc gggatgggag cgctgggcga
480
cgacgaaacg ccccgacgcc gtaacgccgt gggcttggag atcgcaggtc cacttctctg
ggctttcacc ggcagagatc atggtgtgga ccaccattgt g
581
<210> 1178
<211> 192
<212> PRT
<213> Homo sapiens
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                       10
                                                   15
Thr Cys Asp Leu Gln Ala His Gly Val Thr Ala Ser Gly Arg Phe Val
           20
                               25
                                                   30
Val Ala Gln Arg Ser His Pro Ala Gln Ala Leu Cys Gln Val Pro Ala
                                              45
                        40
Gly Leu Pro Thr Asp Val Arg Leu Lys Ile Ser Lys Asp Ala Pro Glu
                       55
                                          60
Pro Ala Ile Arg Leu Leu Ala Ala Thr Leu His Val Leu Gly Thr Ile
                  70
                                       75
Thr Trp Leu Ala Pro Ala Gln Val Asp His Leu Leu Ala Thr Asp Val
              85
                                  90
Leu Pro Arg Glu Val Ser Ile Ile Ala Gly Phe Asp Asp Ala Leu Ile
                              105
          100
Gly Val Val Ala Pro Tyr Arg Ala Ile Leu His Asp Ala Met Gly Ser
      115
                          120
                                              125
Thr Glu Ile Asp Val Pro Ala Leu Ile Asp Asn Ile Pro Asp Asp Lys
                       135
                                          140
Val Phe Pro Ser Ala Glu Asp Glu Leu Ser Ala Leu Asp Ile Val Ala
                                     155
                  150
Ser Leu Gly Asn Ala His Leu Ser Gln Leu Cys Asp Gly Val His Lys
              165
                                 170
                                                     175
Lys Thr Val Phe Gly Cys Ser Cys Trp Ser Arg Ala Thr His His Ala
                              185
<210> 1179
<211> 597
<212> DNA
<213> Homo sapiens
<400> 1179
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gattggggct tctggacatg ctgccacaag atgtctggaa actccagggg gcacctgccg
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agaccctgcc ctgggaacgg ccggaagaat cccaaaacat gagattccgg tgcagctgag
ccccgccaat tcattgtctc tttcagtccc ttctgaaggc tgcatttggc aatgtgaccc
tcggggtggg gaaggcatca gaggaataca ggctatggga cgccagaggc agcgtcctgg
300
ggacaaagcc cacttettee catgeceagg getteeteat ggacecagea tggtggacgt
ggccctcaga cgtccatggg tggtggggga ggcacgtgct gtttggccct gtctctgctc
420
agagteteat aggaagatge atggtecaca caacagtgag teggeaggga gtecaggett
cccctcccaa ccagtggtgt tgagacgett ggtttataac ccaagatece ttgtcccatt
ggtgcctcct gaatctccca cctcccgcgg cacctgcatg gcctctacct gacgcgt
597
<210> 1180
<211> 105
<212> PRT
<213> Homo sapiens
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Met Gly Arg Gln Arg Gln Arg Pro Gly Asp Lys Ala His Phe Pro
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Cys Pro Gly Leu Pro His Gly Pro Ser Met Val Asp Val Ala Leu Arg
           20
                                25
                                                    30
Arg Pro Trp Val Val Gly Glu Ala Arg Ala Val Trp Pro Cys Leu Cys
                            40
       35
Ser Glu Ser His Arg Lys Met His Gly Pro His Asn Ser Glu Ser Ala
                        55
Gly Ser Pro Gly Phe Pro Ser Gln Pro Val Val Leu Arg Arg Leu Val
                                        75
                                                             80
65
                    70
Tyr Asn Pro Arg Ser Leu Val Pro Leu Val Pro Pro Glu Ser Pro Thr
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                                    90
Ser Arg Gly Thr Cys Met Ala Ser Thr
            100
                                105
<210> 1181
<211> 352
<212> DNA
<213> Homo sapiens
<400> 1181
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ttcctcgage acgacgacge taaccgtgce ctgatgggtg cgaacatgca gcgtcaggct
gtgccgctgc tgcgttcgga ggctccgttc gtcggtaccg gtatggagca gcgtgctgct
180
tacgacgccg gcgatgtcat tgtcgcttcg gccacaggtg tggtcgagac cgtgtcggca
ggetteatea ceateatgga egatgaggge cagegecaea cetacetget gegeaagtte
300
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gagegeacea accagggeae etgetacaae cagaageeae tgttgaegag gg
352
<210> 1182
<211> 117
<212> PRT
<213> Homo sapiens
<400> 1182
Val Asp Tyr Leu Asp Val Ser Pro Arg Gln Met Val Ser Val Ala Thr
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1
Ala Met Ile Pro Phe Leu Glu His Asp Asp Ala Asn Arg Ala Leu Met
            20
                                25
                                                    30
Gly Ala Asn Met Gln Arg Gln Ala Val Pro Leu Leu Arg Ser Glu Ala
                            40
Pro Phe Val Gly Thr Gly Met Glu Gln Arg Ala Ala Tyr Asp Ala Gly
Asp Val Ile Val Ala Ser Ala Thr Gly Val Val Glu Thr Val Ser Ala
                    70
Gly Phe Ile Thr Ile Met Asp Asp Glu Gly Gln Arg His Thr Tyr Leu
                                    90
                                                        95
Leu Arg Lys Phe Glu Arg Thr Asn Gln Gly Thr Cys Tyr Asn Gln Lys
                                105
           100
Pro Leu Leu Thr Arg
        115
<210> 1183
<211> 432
<212> DNA
<213> Homo sapiens
<400> 1183
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cetettegee eetgeeeget eacetgttet gteetgetea cetecteeag gaageetgee
tggccttctc catgctgatg ggcgtggccc ttgtccctgc agccatgcat tgacctccgt
180
ggctcctgga ggccaggcca cgtcctcatc ccctctgggt gagtgagagg cacagcctgg
240
gtgcgtgggg ccgtggcggc tccgaggcgc caccgctgtg tcctctcatg agtgggtgcc
gtccaggtct gtcctgggct ggctgcgagg aggaggttgg cctcgcgcgg ccatgtgcgt
gacagtggag acategeeag ceteetgett geacagetga eggeageece teteteteea
gccatgtccc ca
432
<210> 1184
<211> 141
<212> PRT
<213> Homo sapiens
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<400> 1184
 Met Ala Gly Glu Arg Gly Ala Ala Val Ser Cys Ala Ser Arg Arg Leu
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 Ala Met Ser Pro Leu Ser Arg Thr Trp Pro Arg Glu Ala Asn Leu Leu
             20
                                 25
 Leu Ala Ala Ser Pro Gly Gln Thr Trp Thr Ala Pro Thr His Glu Arg
        35
                            40
 Thr Gln Arg Trp Arg Leu Gly Ala Ala Thr Ala Pro Arg Thr Gln Ala
    50
                         55
                                             60
 Val Pro Leu Thr His Pro Glu Gly Met Arg Thr Trp Pro Gly Leu Gln
                    70
                                         75
 Glu Pro Arg Arg Ser Met His Gly Cys Arg Asp Lys Gly His Ala His
                                    90
 Gln His Gly Glu Gly Gln Ala Gly Phe Leu Glu Glu Val Ser Arg Thr
            100
                                105
                                                    110
 Glu Gln Val Ser Gly Gln Gly Arg Arg Gly Arg Gly Ser Ala Gly Glu
                            120
                                                125
 Asp Gly Leu Thr Thr Arg Leu Asp Gln Arg Pro Glu Gly
    130
                        135
 <210> 1185
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 <212> DNA
<213> Homo sapiens
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gaattacgcg gcaaatatgt attgttgggt gaaggtgtac ggggctctct atctaaacaa
gtcatcaata aataccaatt atccgagggt catgaaccac aaaagttcgg ccttggctta
aaagaaattt gggaaataga cccagaaaaa cacaaagaag gcagagtcag tcataccatg
ggctggccat taaatggcaa tgctggcggc ggttctttta tttatcatgc agaaaacaat
caagtettta teggetttgt ggtgeatett aattaegeea accettaeet ateccettae
caagaatttc aacgetttaa acaccatccg attatcgcgg agctattaac tggcggtaaa
420
cqc
423
<210> 1186
<211> 141
<212> PRT
<213> Homo sapiens
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Thr Gly Glu Phe Gly Leu Asn Ser Asp Gly Thr Pro Gly Pro Ser Tyr
                                   10
Glu Pro Gly Met Glu Leu Arg Gly Lys Tyr Val Leu Leu Gly Glu Gly
           20
                                25
Val Arg Gly Ser Leu Ser Lys Gln Val Ile Asm Lys Tyr Gln Leu Ser
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40
Glu Gly His Glu Pro Gln Lys Phe Gly Leu Gly Leu Lys Glu Ile Trp
                       55
Glu Ile Asp Pro Glu Lys His Lys Glu Gly Arg Val Ser His Thr Met
                    70
Gly Trp Pro Leu Asn Gly Asn Ala Gly Gly Gly Ser Phe Ile Tyr His
               85
                                   90
Ala Glu Asn Asn Gln Val Phe Ile Gly Phe Val Val His Leu Asn Tyr
            100
                                105
                                                    110
Ala Asn Pro Tyr Leu Ser Pro Tyr Gln Glu Phe Gln Arg Phe Lys His
                            120
His Pro Ile Ile Ala Glu Leu Leu Thr Gly Gly Lys Arg
    130
                        135
<210> 1187
<211> 387
<212> DNA
<213> Homo sapiens
<400> 1187
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aaggtccagg gctataatgc aatagatggc atagtcggtg ggaacttaga agatatggta
120
gtacccactg ctcgaatttc tcctcaagca acatcaagtg ttgatttaaa agtgaatctt
aattccgaag gtgaggatgt gccgccttat attcgagcgg actttgatcc agccaatcca
gatacttatg actatactca gacccaaacg gttgcggatg ggagtggtaa taatcattta
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gatgggaagt cgactgatga taccggt
387
<210> 1188
<211> 129
<212> PRT
<213> Homo sapiens
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Thr Arg Ala Gly Glu Phe Lys Leu Asn Ala Asp Gly Asn Leu Val Thr
                                   10
Asn Ser Gly Ala Lys Val Gln Gly Tyr Asn Ala Ile Asp Gly Ile Val
           20
                                25
Gly Gly Asn Leu Glu Asp Met Val Val Pro Thr Ala Arg Ile Ser Pro
                            40
Gln Ala Thr Ser Ser Val Asp Leu Lys Val Asn Leu Asn Ser Glu Gly
Glu Asp Val Pro Pro Tyr Ile Arg Ala Asp Phe Asp Pro Ala Asn Pro
                   70
                                       75
Asp Thr Tyr Asp Tyr Thr Gln Thr Gln Thr Val Ala Asp Gly Ser Gly
               85
                                   90
Asn Asn His Leu Ile Ser Tyr Tyr Tyr Ala Lys Ser Asp Val Ala Asn
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105
           100
Thr Tyr Gln Val Tyr Ala Thr Val Asp Gly Lys Ser Thr Asp Asp Thr
       115
Gly
<210> 1189
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<212> DNA
<213> Homo sapiens
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gccattgccc gctgggcacg gctgcccagc agcctggatg cgctcaaacc gattctgatc
atttcgctgc tggccagcct gttcactggg ttggtgatga tctacgtggt cggccagccg
gtggcggcca tgctcggagg cctgacacac tttctcgaca gcatgggtac caccaacgcc
300
atteteetgg gentgttget eggeggetag
330
<210> 1190
<211> 109
<212> PRT
<213> Homo sapiens
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Ser Ile Ala Asp Arg Pro Gly Leu Ala Pro Gly Met Ile Gly Gly Leu
Leu Ala Ser Thr Leu Gly Ala Gly Phe Ile Gly Gly Ile Val Ala Gly
                                25
Phe Leu Ala Gly Tyr Ser Ala Lys Ala Ile Ala Arg Trp Ala Arg Leu
                           40
       35
Pro Ser Ser Leu Asp Ala Leu Lys Pro Ile Leu Ile Ile Ser Leu Leu
                                          60
                       55
Ala Ser Leu Phe Thr Gly Leu Val Met Ile Tyr Val Val Gly Gln Pro
                    70
                                        75
Val Ala Ala Met Leu Gly Gly Leu Thr His Phe Leu Asp Ser Met Gly
              85
                                    90
Thr Thr Asn Ala Ile Leu Leu Gly Xaa Leu Leu Gly Gly
                               105
<210> 1191
<211> 351
<212> DNA
<213> Homo sapiens
cggccgacga tgtgcggtga gcaagagatt tggagagcca tgatgacgtc agcagacaaa
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gcagggacta acggacagac catgcagaca ccgccggtgg tgtcgccgca ggactgggag
120
gcagcccgtc agcaactgct cgtgaaggaa aaggcgcata cccgtgcccg cgacgcactc
180
geogeogaac ggaggegeat geogtggatg gaagtgacaa aaacctacge attegaggeg
240
ccctcgggca aggccagtct gctcgatctg ttccagggcc ggaagcagct gatcctgtac
egggeettet tegageeggg egtgttegge tggeeegace atgeetgeeg e
351
<210> 1192
<211> 114
<212> PRT
<213> Homo sapiens
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Met Cys Gly Glu Gln Glu Ile Trp Arg Ala Met Met Thr Ser Ala Asp
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1
                 5
Lys Ala Gly Thr Asn Gly Gln Thr Met Gln Thr Pro Pro Val Val Ser
            20
                                25
Pro Gln Asp Trp Glu Ala Ala Arg Gln Gln Leu Leu Val Lys Glu Lys
        35
                            40
                                                 45
Ala His Thr Arg Ala Arg Asp Ala Leu Ala Ala Glu Arg Arg Met
    50
                        55
                                             60
Pro Trp Met Glu Val Thr Lys Thr Tyr Ala Phe Glu Ala Pro Ser Gly
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Lys Ala Ser Leu Leu Asp Leu Phe Gln Gly Arg Lys Gln Leu Ile Leu
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Tyr Arg Ala Phe Phe Glu Pro Gly Val Phe Gly Trp Pro Asp His Ala
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120
cocagostoc tygococtto tytacatgat titlocityty gocactocat goattittet
tggctcagga cttagtgggc ctccatggga cttggtacct ctacttgttc ccttctggaa
240
tetgtaactt tgtgtteece accattettt eetttatgaa eegatggtge aacageatga
ctacctgaaa ttcttagtca ctcccagctg ctttagtgga gggaaaatgc ccacagcaca
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722
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            20
Glu Arg Gly Gln Gly Met Gly Ala Cys Pro Glu Lys Gly Asp Gly Leu
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Met Lys Gly Gly His Ser Ala Arg Glu Glu Gly Ala Arg Thr Leu Ser
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Val Leu Phe His Glu Glu Asp Tyr Val Gly Val Cys Ser Pro Leu Val
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Gln Ser Cys Pro Glu Ile Ala Gln Cys Lys Glu Gln Phe Ser Lys Asp
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Gln Lys Ser Cys Leu Lys Ile Ala Val Arg Ser Gln Pro Leu Gln Val
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300
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                                                45
Cys Leu Asn Gly Pro Val Tyr Ser Ala Asp Ser Arg Thr Gly Arg Thr
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Pro Ala Arg Pro Ile Tyr Leu Asp Trp Leu Cys Leu Lys Ala Ser Val
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           20
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Asp Glu Pro Phe Leu Pro Val Ala Leu Ile His Ala Thr Val Lys Ala
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Leu Ala Asp Asp Ala Glu Ser Glu Met Ala Thr Ile Ala Cys Ala Ile
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                                           60
Asp Asn Val Ala Glu Leu Phe Asn Pro Asn Val Val Lys Val Val Cys
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Asp Glu Lys Gln Arg Ala Leu Tyr Phe Ser Arg Ala Pro Met Pro Trp
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Asp Arg Asn Gly Phe Met Glu Lys Thr Asp Asp Gln Ala Leu Pro Ala
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Asp Phe Pro Ala Leu Arg His Ile Gly Pro Tyr Val Tyr Arg Thr Thr
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Ile Ser Gln Ala Ala Leu Pro Tyr Ile Ser Leu Ile Gly Gly Val Tyr
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Thr Leu Tyr Leu Ala Tyr Gln Val Phe Thr Ala Arg Thr Glu Val Asp
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Ser Asp Val Tyr Ser Phe Gly Val Gly Leu Leu Glu Leu Leu Thr Gly
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                            40
Arg Lys Pro Val Asp Leu Pro Leu Pro Arg Gly Gln Gln Ser Leu Val
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                                            60
Thr Trp Ala Thr Pro Arg Leu Cys Glu Asp Lys Val Arg Gln Cys Val
Asp Ser Arg Leu Gly Val Glu Tyr Pro Pro Lys Ser Val Ala Lys Phe
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                                    90
Ala Ala Val Ala Ala Leu Cys Val Gln Tyr Glu Ala Asp Phe Arg Pro
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300
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Thr Asp Gly Arg Gly Cys Ala Asn Gly Thr Leu Val Tyr Gln Cys Val
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                                25
Ala Glu Arg Phe Lys Gly Cys Trp Pro Pro Pro Ser Leu Ala Gln Ser
                            40
                                                45
Arg Cys Gly Gly Asn Leu Ser Ala Gln Asn Leu Asp Leu Val Val
                                            60
                        55
    50
Arg Arg Cys Pro Leu Leu Ala Arg Thr Pro Leu Met Leu Arg His Val
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                                        75
Ala Glu Arg Val Thr Arg Tyr Pro Gly Thr Met Arg Met Val Ser Thr
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                                    90
Glu Ala Leu Ala Asn Arg Lys
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<212> DNA
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120
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Glu Glu Ala Cys Leu His Ser Tyr Val Leu Ser Arg Pro Cys Phe Ser
            20
                                25
                                                    30
Ser His Val Trp Asp Asn Gln Gly Cys Ser Pro Pro Ser Glu Phe Gln
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40
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        35
Gly His Ser Thr Cys Pro Ser Lys Ser Tyr Gln His Leu Ser Trp Leu
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Leu Asn Lys Thr Gln Trp His Pro Cys Gly Cys Leu Pro Ser Ser Phe
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           20
Glu Tyr Ala Phe Thr Pro Ala Ser Ala Gln Gly Gly Phe Ala Gly Ala
                           40
Thr Val Trp Met Ala Ile Arg Phe Gly Val Ala Arg Gly Val Phe Ser
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Asn Glu Ala Gly Leu Gly Ser Ala Pro Ile Ala His Ala Ser Ala Gln
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Thr Asn Glu Pro Val Arg Gln Gly Leu Val Ala Met Leu Gly Thr Phe
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Leu Asp Thr Leu Ile Ile Cys Thr Gly Leu Val Ile Val Ile Ser Gly
                                                  110
           100
                               105
Ala Trp Thr Glu Gly Leu Ser Gly Ala Ala Leu Thr Ser Ala Ala Phe
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                                                125
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1141
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25
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Pro Ser Gly Arg Trp Ser Tyr Gly Tyr Asn Glu Ala Gly Ser Leu Ile
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Ser Ala Thr Gly Pro Arg Thr Gln His Asn Trp Thr His Asp Ala Tyr
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Gly Arg Leu Thr Ser His Ala Thr Ser Gly Thr Asp Thr Thr Phe Ala
                                      75
Trp Asp Gln Glu Gly His Leu Ala Gln Thr Cys Thr Arg Ala His Gly
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His Ala Thr Ala Thr Gln Tyr Arg Tyr Asp Ala Ala Gly Arg Arg Val
          100
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Ser Ala Thr Ser Ser Asp Gly Gln Glu Glu Arg Tyr Ser Trp Asp Gly
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Arg Gly Trp Leu Ser Asp Ile Thr Thr Asp Ala Thr Thr Val Ser Thr
                    135
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His Val Asp Ala Leu Gly Arg Ala Ser Arg Ile Thr Thr Lys Gly Gln
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           150
Gln Val Arg Val Asp Trp Asp Leu Val Thr Gly Ala Pro Thr Ser Ile
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Asp Gly Arg Pro Val Leu Pro Leu Pro Gly Gly Arg Ile Leu Gly Ala
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Thr Pro Ile Gly Asp Thr Asn Leu Trp Arg Glu Val Met Pro Thr Asp
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Pro Asp Asn Pro Tyr Gln Pro Ala Thr Ala Thr Ile Glu Gly Val Pro
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            215
Glu Thr Ile Arg Met Ala Gly Asn Thr Leu Val Val Asp Gly His Pro
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Trp Trp Gly Arg Ala Ser Thr Thr Gln Leu Pro Pro Pro Ser Cys Leu
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Ala Gln Met Val Arg Gly Thr Phe Glu Arg Ile Asn His Leu Ile Asp
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Ala Glu Asn Glu Leu Ile Ala Ala Arg Glu Asp Ala Gln Arg Arg Glu
                                       75
                   70
Leu Ile Leu Ser Ala Leu Leu Asn Asn Ile Pro Asp Pro Val Trp Ser
               85
                                  90
Lys Asp Glu Ser Gly Arg Tyr Leu Asp Cys Asn His Ala Phe Cys Leu
                               105
          100
Phe Asn Gly Leu Glu Gln Ser Asp Val Gln Gly Gln Lys Asp Ser Glu
       115
                           120
Leu Asn Leu Asp Asn Asn Gly Gln Tyr Tyr Gln Asp Met Gly Glu
                                          140
                      135
Val Leu Ala Arg Gly Glu Ile Phe His Glu His Cys Trp Gly Thr Pro
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Ala Asp Gly Ser Asp Asn Arg Leu Phe Glu Val Tyr Arg Val Pro Ile
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Lys Glu Pro Thr Val Asn
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Lys Phe Pro Asp His Pro Pro Ser Phe Gln Thr Lys Thr Gly Met Ala
                           40
Leu Asn His His Pro Lys Ala Arg Gly Val Leu Lys Pro Lys Pro Ser
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                              105
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gacaaagcac gtacacgtaa gatgggcggt acaggactag gtctagctat ttccaaagag
180
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780

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Pro	Glu	Asn	Trp	Ala			Lys	Arg	Cys			Cys	Asp	His		
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195	.	-1-	-1 -			~1 	.	•		•	m		01			G
Ser Gly	Ser	iie		ASN	GIU	GIN	ASD	-		Arg	Trp	Arg	_	ser	cys	ser
210		~1		C	C1 m	D	n			Dage	71.	mb se		71	7	C
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225	Cl.		Lice	Mot	λen	Dho		724	T10	G1.	Lou		Gly	λla	V-1	Gly
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Second S		Lve	Glu	Glu	T.en		Va 1	Δen	Dhe	Lvg		Len	T.ve	Gln	Tle	
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Val		ر		-	-1-									-		1
State Stat	Val	Val	Glu		Asp	Leu	Ala	Ala		Glu	Ala	Tyr	Lys		Ser	Gly
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State	_				_					_			_			
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Asp Phe Ala Cys Tyr Phe Leu Thr Asp Leu Thr Phe Thr Phe Asp Leu Thr Phe Phe Thr Phe Asp Leu Phe Asp Asp Asp Asp Leu Asp Asp <td>Glu</td> <td>Gln</td> <td></td> <td>Arg</td> <td>Arg</td> <td>Glu</td> <td>Ile</td> <td></td> <td>Ala</td> <td>Ser</td> <td>Leu</td> <td>His</td> <td></td> <td>Arg</td> <td>Lys</td> <td>Gly</td>	Glu	Gln		Arg	Arg	Glu	Ile		Ala	Ser	Leu	His		Arg	Lys	Gly
Ala Asp Ile Glu Asp Leu Pro Pro Pro Thr Val Gln Glu Lys Leu Phe Asp 385	•	.		_		n L -	•		•		••- •	m\		m\	•	D
Ala Asp Ile Slu Spr. Leu Pro Spr. Thr Val Gln Glu Spr. Leu Glu Glu Glu Glu Glu Glu Glu Glu Glu Gl	Asp		Ala	Cys	Tyr	Pne		Thr	Asp	Leu	vaı		Pne	Thr	Leu	Pro
385 390 395 395 400 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 610 6	77-		T10	C1	N am	Lou		Dro	Th.	1701	C15		T 1/0	T 033	Dho) an
Calu		Азр	ire	GIU	ASP		PIO	PIO	Int	vaı		GIU	гуз	Leu	PHE	_
The color The		Val	T.em	Asn	Ara		Val	Gln	Lvs	Glu		Glu	Glu	Glu	Ser	
The The Ass The Ser Leu Glu Leu Ala The Arg Leu Ass Ser Arg Leu Ass Arg Arg Ass Arg The Ala Gly Ass Cys Leu Leu Ass Ser Val Ass Arg Arg Arg		V.C			-		*41		_,_							
Tyr Ala Leu Trp Asn Arg Thr Ala Gly Asp Cys Leu Leu Asp Ser Val 435 455 460 Leu Gln Ala Thr Trp Gly Ile Tyr Asp Lys Asp Ser Val Leu Arg Lys 450 455 460 Ala Leu His Asp Ser Leu His Asp Cys Ser His Trp Phe Tyr Thr Arg 465 470 475 480 Trp Lys Asp Trp Glu Ser Trp Tyr Ser Gln Ser Phe Gly Leu His Phe 485	Ile	Ile	Asn	Trp		Leu	Glu	Leu	Ala		Ara	Leu	Asp	Ser		Leu
Leu Gln Ala Thr Trp Gly Ile Tyr Asp Lys Asp Ser Val Leu Arg Lys 450				_							_		•		J	
Leu Gln Ala Thr Str Str Str Str Str Str Str Str Str St	Tyr	Ala	Leu	Trp	Asn	Arg	Thr	Ala	Gly	Asp	Cys	Leu	Leu	Asp	Ser	Val
Ala Leu His Asp Ser Leu His Asp Cys Ser His Trp Phe Tyr Thr Arg 465			435					440	_	_			445	_		
Ala Leu His Asp Ser Leu His Asp Cys Ser His Trp Phe Tyr Arg 465	Leu	Gln	Ala	Thr	Trp	Gly	Ile	Tyr	Asp	Lys	Asp	Ser	Val	Leu	Arg	Lys
465		450					455					460				
Trp Lys Asp Trp Glu Ser Trp Tyr Ser Gln Ser Phe Gly Leu His Phe 495 Ser Leu Arg Glu Glu Gln Trp Gln Glu Asp Trp Ala Phe 510	Ala	Leu	His	Asp	Ser	Leu	His	Asp	Cys	Ser	His	\mathtt{Trp}	Phe	Tyr	Thr	Arg
Ser Leu Arg Glu Glu Gln Trp Gln Glu Asp Trp Ala Phe Ile Leu Ser 500																
Ser Leu Arg Glu Glu Glu Trp Glu Asp Trp Ala Phe Ile Leu Ser Leu Ala Ser Glu Pro Gly Ala Ser Leu Glu Thr His Ile Phe Val Leu Ala His Ile Leu Arg Pro Ile Ile Val Tyr Gly Val Lys Tyr Tyr Ile Val Tyr Tyr Ile I	Trp	Lys	Asp	Trp		Ser	Trp	Tyr	Ser		Ser	Phe	Gly	Leu		Phe
Leu Ala Ser Gln Pro Gly Ala Ser Leu Glu Gln Thr His Ile Phe Val 515	_	_					_				_					_
Leu Ala Ser Gln Pro Gly Ala Ser Leu Glu Gln Thr His Ile Phe Val 525	Ser	Leu	Arg			Gin	Trp	GIn		_	Trp	Ala	Phe		Leu	Ser
S15	7	.1-	6			a 1					G1	m1			Db -	
Leu Ala His Ile Leu Arg Arg Pro Ile Ile Val Tyr Gly Val Lys Tyr 530	Leu	ALA		GIN	Pro	GIY	Ата		Leu	GIU	GIN	Thr		TTE	Pne	vai
530 535 540 Tyr Lys Ser Phe Arg Gly Glu Thr Leu Gly Tyr Thr Arg Phe Gln Gly 545 550 555 560 Val Tyr Leu Pro Leu Leu Trp Glu Gln Ser Phe Cys Trp Lys Ser Pro	Lou	71-		т1 ^	T 011	7	7. ***		т1.	T1.	17-1	The same		1701	T 110	Tree
Tyr Lys Ser Phe Arg Gly Glu Thr Leu Gly Tyr Thr Arg Phe Gln Gly 545 550 555 560 Val Tyr Leu Pro Leu Leu Trp Glu Gln Ser Phe Cys Trp Lys Ser Pro	neg		HIS	116	ren	wrd	_	PIO	116	116	val	-	GIÀ	vaı	PAR	TAT
545 550 550 560 Val Tyr Leu Pro Leu Leu Trp Glu Gln Ser Phe Cys Trp Lys Ser Pro	Tur		Ser	Dhe	Δτα	Glv		Thr	Leur	Glv	TUY		Δτσ	Dhe	Gln	Glv
Val Tyr Leu Pro Leu Leu Trp Glu Gln Ser Phe Cys Trp Lys Ser Pro	-	2,3		1.16	9	-	Jau	****	204	J- 7	-	****	9		J-11	_
		Tyr	Leu	Pro	Leu		Tro	Glu	Gln	Ser		Cys	Tro	Lys	Ser	
210 272	-				565		F			570		, -	F	•	575	
Ile Ala Leu Gly Tyr Thr Arg Gly His Phe Ser Ala Leu Val Ala Met	Ile	Ala	Leu	Gly	Tyr	Thr	Arg	Gly	His	Phe	Ser	Ala	Leu	Val	Ala	Met

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585
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Glu Asn Asp Gly Tyr Gly Asn Arg Gly Ala Gly Ala Asn Leu Asn Thr
                         600
Asp Asp Asp Val Thr Ile Thr Phe Leu Pro Leu Val Asp Ser Glu Arg
                    615
                                          620
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Lys Leu Leu His Val His Phe Leu Ser Ala Gln Glu Leu Gly Asn Glu
625
                  630
                                       635
Glu Gln Gln Glu Lys Leu Leu Arg Glu Trp Leu Asp Cys Cys Val Thr
               645
                                  650
                                                       655
Glu Gly Gly Val Leu Val Ala Met Gln Lys Ser Ser Arg Arg Arg Asn
                               665
                                                   670
            660
His Pro Leu Val Thr Gln Met Val Glu Lys Trp Leu Asp Arg Tyr Arg
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Gln Ile Arg Pro Cys Thr Ser Leu Ser Asp Gly Glu Glu Asp Glu Asp
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Asp Glu Asp Glu
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gacetecteg etgagetace gecettecte ggaggeggeg agatgatega ggtegtgege
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gcacagetgg etgecetegg ggtggcegee gactacetag atggcategg gatgcaggee
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Ile Gly Ile Leu Trp Gly Arg Tyr Asp Leu Leu Ala Glu Leu Pro Pro
       3.5
                           40
                                              45
Phe Leu Gly Gly Glu Met Ile Glu Val Val Arg Met Glu Gly Ser
                       55
                                           60
Thr Tyr Ala Glu Pro Pro His Arg Phe Glu Ala Gly Thr Pro Pro Ile
```

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70
                                         75
65
Ala Gln Leu Ala Ala Leu Gly Val Ala Ala Asp Tyr Leu Asp Gly Ile
                                    90
Gly Met Gln Ala Ile Ala Glu His Glu His Glu Leu Ala Ala Arg Met
            100
                                105
                                                     110
Leu Glu Asp Tyr Gln Thr Val Lys Gly Val Gln Pro Glu Arg Gly
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                            120
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<211> 1608
<212> DNA
<213> Homo sapiens
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tgctggccta gggccggggc tactagaaca aggtgatctg ggctcttggg atctgctcat
ttgcctgtct tctaagaaag cagaaggaac accctgtata tccaaggaag tcatgtgcca
240
gttaggttta catcaaaagg caaacagatt accagaaata cagcagccac tttgcagaaa
ggaaggatta tgtcaaatag ttagaagatt cccagaactg caacttccag tgagtccctc
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tgtgtgtctg gatcagggaa tgcaattaaa gccgagtact tcgagtcacc ttttaaaaac
agtgaagcca cgtgtgtgga aaccagggga ctggagtcgt gaacagctga atgaaacgac
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gtatgtgttg gtgacgtcct taaccccttt gcgtgcattc attcattcga ctggcacagt
ttggaatcca ccaaagaaaa aacgcttcac tgtcaagctg caaacatttt ttgagacatt
660
cctgagagcc agttcacctc aacaggcttt tgacattatg aaggaagcaa ttggcaaact
actgctagcc gctgaagtat tcagtgaaac atctactctg ggaccaaaga ccttccatag
atgcagattc tgctttcaac ttctaacttt tgatattggt tatggcagtt tcatgtaccc
tgtagtgctc caggtacacg agcatttaaa ttttcaagat tatgataata tggattttga
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atcatcactt tccatatttt ctgagatatt tcagagactt tatagatcag atgttttcaa
1020
gggtgaaaac tatcaaaagg aactaaatca gtgtctgtcc ttagaagaaa ttaactcaat
tatgactttc ataaaggaac ttggaagtct gggacaattc caactgctct tcccatctac
1140
tactcctggg attcagtcac tgatgcatga attttatgat gtggcaaatc ctgtgggaaa
1200
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tcctggctca gtcctgaccc aatactggtc tcttttaaat gtatttgaac aatttcagtt
cattgaaaaa ccacaagtgc catttgatgc aatagaaaat aaaaaagctg cagttccaca
aattaaaaat gaaaataaag aaatacattg cagtgatgat gaaaacacac catgtcatat
caaqcaqate ttcacacate cacatttgga actaaateet gaetttcate caaagateaa
agattattac tgtgaagtcc catttgatgt ggtaacagtg acaattggag tggaaactcc
taagtgtetg tgcaaggtge acctgtacga gcaggcaggg ccaagett
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Gln Gln Pro Leu Cys Arg Lys Glu Gly Leu Cys Gln Ile Val Arg Arg
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Phe Pro Glu Leu Gln Leu Pro Val Ser Pro Ser Val Cys Leu Asp Gln
                                           45
             40
       35
Gly Met Gln Leu Lys Pro Ser Thr Ser Ser His Leu Leu Lys Thr Val
                     55
                                       60
Lys Pro Arg Val Trp Lys Pro Gly Asp Trp Ser Arg Glu Gln Leu Asn
                  70
                                    75
Glu Thr Thr Val Leu Ala Pro His Glu Thr Ile Phe Arg Ala Lys Asp
                                                  95
              85
                                90
Leu Ser Val Ile Leu Lys Ala Tyr Val Leu Val Thr Ser Leu Thr Pro
                                              110
                           105
         100
Leu Arg Ala Phe Ile His Ser Thr Gly Thr Val Trp Asn Pro Pro Lys
                120
                                           125
     115
Lys Lys Arg Phe Thr Val Lys Leu Gln Thr Phe Phe Glu Thr Phe Leu
  130
                     135
                                       140
Arg Ala Ser Ser Pro Gln Gln Ala Phe Asp Ile Met Lys Glu Ala Ile
                                   155
145
                 150
Gly Lys Leu Leu Leu Ala Ala Glu Val Phe Ser Glu Thr Ser Thr Leu
                                170
                                                 175
Gly Pro Lys Thr Phe His Arg Cys Arg Phe Cys Phe Gln Leu Leu Thr
                                               190
          180
                            185
Phe Asp Ile Gly Tyr Gly Ser Phe Met Tyr Pro Val Val Leu Gln Val
                         200
                                          205
His Glu His Leu Asn Phe Gln Asp Tyr Asp Asn Met Asp Phe Glu Asp
                                       220
                    215
Gln Asn Thr Glu Glu Phe Leu Leu Asn Asp Thr Phe Asn Phe Leu Fhe
                                   235
                 230
Pro Asn Glu Ser Ser Leu Ser Ile Phe Ser Glu Ile Phe Gln Arg Leu
                                250
              245
Tyr Arg Ser Asp Val Phe Lys Gly Glu Asn Tyr Gln Lys Glu Leu Asn
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260
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Gln Cys Leu Ser Leu Glu Glu Ile Asn Ser Ile Met Thr Phe Ile Lys
                           280
                                                285
Glu Leu Gly Ser Leu Gly Gln Phe Gln Leu Leu Phe Pro Ser Thr Thr
                       295
                                            300
   290
Pro Gly Ile Gln Ser Leu Met His Glu Phe Tyr Asp Val Ala Asn Pro
                                        315
                   310
Val Gly Asn Pro Gly Ser Val Leu Thr Gln Tyr Trp Ser Leu Leu Asn
               325
                                   330
Val Phe Glu Gln Phe Gln Phe Met Asn Lys Lys Thr Gln Pro His Pro
                                345
                                                    350
           340
Leu Glu Trp Asn Ser Phe Thr Glu Asp Lys Asn Ile Glu Lys Pro Gln
                                                365
                           360
Val Pro Phe Asp Ala Ile Glu Asn Lys Lys Ala Ala Val Pro Gln Ile
                       375
Lys Asn Glu Asn Lys Glu Ile His Cys Ser Asp Asp Glu Asn Thr Pro
                   390
                                       395
Cys His Ile Lys Gln Ile Phe Thr His Pro His Leu Glu Leu Asn Pro
                                   410
               405
Asp Phe His Pro Lys Ile Lys Asp Tyr Tyr Cys Glu Val Pro Phe Asp
                               425
Val Val Thr Val Thr Ile Gly Val Glu Thr Pro Lys Cys Leu Cys Lys
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                           440
Val His Leu Tyr Glu Gln Ala Gly Pro Ser
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<400> 1239
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atggtgtgca acttgcggga attcaaggaa tttatagaca atgaaatgat agtgatcctt
ggtcaaatgg atagccctac acagatattt gagcatgtgt tcctgggctc agaatggaat
gcctccaact tagaggactt acagaaccga ggggtacggt atatcttgaa tgtcactcga
gagatagata actititiccc aggagictiti gagiatcata acaticgggi ataigatgaa
gaggcaacgg atctcctggc gtactggaat gacacttaca aattcatctc taaagcaaag
aaacatggat ctaaatgcct tgtgcac
447
<210> 1240
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Ile Pro Thr Glu Arg Glu Arg Thr Glu Arg Leu Ile Lys Thr Lys Leu
                                    10
                                                        15
Arg Glu Ile Met Met Gln Lys Asp Leu Glu Asn Ile Thr Ser Lys Glu
                                25
            20
Ile Arg Thr Glu Leu Glu Met Gln Met Val Cys Asn Leu Arg Glu Phe
                            40
       35
Lys Glu Phe Ile Asp Asn Glu Met Ile Val Ile Leu Gly Gln Met Asp
                                            60
   50
                        55
Ser Pro Thr Gln Ile Phe Glu His Val Phe Leu Gly Ser Glu Trp Asn
                                        75
65
Ala Ser Asn Leu Glu Asp Leu Gln Asn Arg Gly Val Arg Tyr Ile Leu
               85
                                    90
Asn Val Thr Arg Glu Ile Asp Asn Phe Phe Pro Gly Val Phe Glu Tyr
                                105
            100
His Asn Ile Arg Val Tyr Asp Glu Glu Ala Thr Asp Leu Leu Ala Tyr
                           120
                                                125
Trp Asn Asp Thr Tyr Lys Phe Ile Ser Lys Ala Lys Lys His Gly Ser
                        135
   130
Lys Cys Leu Val His
145
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aactaggcag acagaccgac agataggggg aaaccgggat gtttaatgtg tccgaacaag
taggaagatc aatgaggcgc gagtgtgtgt gtgtacgtgt gcgcgtgtgt gtgtgagaga
gagagaaaga aagaagaaag gtcccgattg caacgtgtca gatcttgcaa ccttccccc
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ggatttgtgt tgtgaggtcg gtggtgcgtt cttttctttc tcttctcgcc tgttttcccg
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attcatgct
489
<210> 1242
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15
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                                   10
Leu Ala Thr Gln Ala Leu Arg Glu Asn Arg Arg Glu Glu Lys Glu Lys
                                                   30
                              25
Asn Ala Pro Pro Thr Ser Gln His Lys Ser Ser Phe Trp Pro Tyr Ser
                          40
                                                45
       35
Val Cys Thr Ile Ala Leu Pro Thr His Gly Ser Phe Asn Pro Glu Asp
                       55
                                           60
   50
Leu Gly Tyr Gln Ser Ala Met Val Phe Leu Cys Leu Arg Val Val Val
                  70
                                       75
Leu Gly Gly Lys Val Ala Arg Ser Asp Thr Leu Gln Ser Gly Pro
                85
                                   90
                                                        95
Phe Phe Phe Leu Ser Leu Ser Leu Thr His Thr Arg Ala His Val His
                              105
                                                   110
           100
Thr His Thr Arg Ala Ser Leu Ile Phe Leu Leu Val Arg Thr His
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                           120
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gtoctagaga ggogogacga gggtttggtg ogtgoogtaa aagtoacgtt tggogoogaa
ccgtctgaca cggaattgta cgggtgggtt agccgtcatg gcaacgcact tatagagcga
ttggagtcta ccgctgctgt ccctaccacc cgcagtcccc gagccaagcg actgaacccc
aagagggcgt tacgagatgc agcgcgagct gcccaagcac accgtgccag cacgnccgca
caggccgcga ttaaggccga tcaggaagct
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            20
                               25
Phe Asp Gly Gln Phe Trp Val Gly Val Leu Glu Arg Arg Asp Glu Gly
                                                45
Leu Val Arg Ala Val Lys Val Thr Phe Gly Ala Glu Pro Ser Asp Thr
                                            60
                        55
Glu Leu Tyr Gly Trp Val Ser Arg His Gly Asn Ala Leu Ile Glu Arg
                    70
                                        75
Leu Glu Ser Thr Ala Ala Val Pro Thr Thr Arg Ser Pro Arg Ala Lys
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85
Arg Leu Asn Pro Lys Arg Ala Leu Arg Asp Ala Ala Arg Ala Ala Gln
                              105
                                                    110
Ala His Arg Ala Ser Thr Xaa Ala Gln Ala Ala Ile Lys Ala Asp Gln
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      115
Glu Ala
   130
<210> 1245
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tetggagagg aggaggttte tgccaetttt caatttegaa ettggaataa ggcagggett
ctgctgttca gtgaacttca gctgatttca gggggtatcc tcctctttct gagtgatgga
aaacttaagt cgaatctcta ccagccaaga aaattaccca gtgacatcac agcaggtgtc
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339
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Ser Cys Ser Gln Pro Gln Ser Met Pro Val Thr Phe Leu Ser Ser Arg
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Ser Phe Leu Ala Leu Pro Asp Phe Ser Gly Glu Glu Val Ser Ala
                                               45
       35
                        . 40
Thr Phe Gln Phe Arg Thr Trp Asn Lys Ala Gly Leu Leu Phe Ser
                       55
                                           60
Glu Leu Gln Leu Ile Ser Gly Gly Ile Leu Leu Phe Leu Ser Asp Gly
                                       75
                   70
Lys Leu Lys Ser Asn Leu Tyr Gln Pro Arg Lys Leu Pro Ser Asp Ile
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Thr Ala Gly Val Glu Leu Asn Asp Gly Gln Trp His Ser Val Ser Leu
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Ser
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geggeetggg egegetggte geggeeatgg accattgtgg cetgggegtt ceteggtate
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366
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                                25
Pro Pro Met Leu Tyr Met Gly Tyr Val Gly Phe Ser Val Ala Phe Ala
       3.5
                                                45
                            40
Phe Ala Ile Ala Ala Leu Leu Gly Gly Arg Leu Asp Ala Ala Trp Ala
Arg Trp Ser Arg Pro Trp Thr Ile Val Ala Trp Ala Phe Leu Gly Ile
                    70
                                        75
65
Gly Ile Thr Leu Gly Ser Trp Trp Ala Tyr Tyr Glu Leu Gly Trp Xaa
                85
                                    90
                                                        95
Gly Trp Trp Phe Trp Asp Pro Gly Glu Asn Pro Phe Phe Met Pro Trp
            100
                                105
Leu Gly Gly Thr Pro Leu Ile His Ser Leu
       115
                            120
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<213> Homo sapiens
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attccactgg aaagcgccgt ggcggatgcg gtggtgtgcg cacaagcctt ccattggttt
tecagegagg eggeeetgge ggaaateeat egggtaetea aaceggatgg gegeetgggg
240
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ggcgagtatt tttg
374
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<212> PRT
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Asp Ala Val Val Cys Ala Gln Ala Phe His Trp Phe Ser Ser Glu Ala
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                                            60
Ala Leu Ala Glu Ile His Arg Val Leu Lys Pro Asp Gly Arg Leu Gly
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                    70
                                        75
Leu Val Trp Asn Val Arq Asp Glu Ser Val Asp Trp Val Ala Ala Ile
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                                    90
Thr Gln Ile Ile Thr Pro Tyr Glu Gly Asp Thr Pro Arg Phe His Thr
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Gly Arg Trp Arg Glu Ala Phe Thr Gly Glu Tyr Phe
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ccagcatcca cctggtgggt gactctgtca accaccgcct gctcttcagt ggctaccagc
accacctgtc tgtccgtgag aaccccatca tcaagaatct caagccggag acgctgatcg
540
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actcctttga gctgctctac tattatgatg agtacctggg tcactgcatg tggtacatcc
cottetteet cateetette atgtaettea geggetgetn ttaetgeete taaagetgag
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                                25
Trp Tyr Ser Leu Ser Ser Gly Phe His Ser Thr Ser Pro Val Leu Gly
       35
                            40
Thr Thr Ser Thr Trp Pro Thr Thr Ser Ser Arg Pro Phe Ser Cys Ser
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Ser Ser Ser Ser Gly Pro Pro Ala Pro Cys Tyr Ala Pro Ser Arg Thr
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cgtgccttcc ttactcagca gacagaagac agatgcagga acaaggcaaa ggcaatctgc
180
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gocatgtotg agggggatge tecaacceet ttttccagag geageeggac tegtgegage
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660
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cagtatggag atgaa
675
<210> 1254
<211> 86
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<213> Homo sapiens
<400> 1254
Met Gly His Gln Glu Arg Leu Arg Asp Gln Thr Arg Ile Pro Lys Leu
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                                    10
                                                        15
Ser His Ser Pro Gln Pro Pro Ser Val Gly Asp Pro Val Glu His Leu
                                25
Ser Glu Thr Ser Ala Asp Ser Leu Glu Ala Met Ser Glu Gly Asp Ala
                           40
                                               45
Pro Thr Pro Phe Ser Arg Gly Ser Arg Thr Arg Ala Ser Leu Pro Val
                        55
Val Arg Ser Thr Asn Gln Thr Lys Glu Arg Ser Leu Gly Val Leu Tyr
                                        75
Leu Gln Tyr Gly Asp Glu
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<211> 401
<212> DNA
<213> Homo sapiens
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gacgattatg ccgtcccgac gcacatgggt agcgaccgcg tgttggtagg cccgcgacca
geaegttgge cetegtegea agagaegeee aacgtgeege tgteeggega ggegeatgea
gtacgccate tgctcgatgc cettctcgac aaggatccag cgacgcgcct cactctcgat
cgtgttataa cacacccatg gctcgtggca gagtcatggt aatagtagca attgtatata
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401
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<211> 113
<212> PRT
<213> Homo sapiens
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Xaa Pro Ile Thr Lys Ala Met Asp Val Trp Ala Leu Gly Val Thr Leu
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Tyr Cys Leu Leu Phe Gly Arg Val Pro Phe Asp Ala Glu Thr Glu Tyr
           20
                               25
Leu Leu Glu Ser Ile Leu His Asp Asp Tyr Ala Val Pro Thr His
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40
Met Gly Ser Asp Arg Val Leu Val Gly Pro Arg Pro Ala Arg Trp Pro
                       55
Ser Ser Gln Glu Thr Pro Asn Val Pro Leu Ser Gly Glu Ala His Ala
                   70
Val Arg His Leu Leu Asp Ala Leu Leu Asp Lys Asp Pro Ala Thr Arg
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                                    90
Leu Thr Leu Asp Arg Val Ile Thr His Pro Trp Leu Val Ala Glu Ser
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Trp
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<212> DNA
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ceggteagea egegeeagag caattttgte ggeacettga atgtetgega agecatgege
180
aaggccggtg tgaagcgtgt ggtatttgct tccagcgttg cggtgtatgg caacaatggc
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294
<210> 1258
<211> 98
<212> PRT
<213> Homo sapiens
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Arg Val Gln Leu Ile Glu Gly Asp Val Ala Asn Ala Asp Leu Val Ala
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                                                        15
Gln Ala Ala Ile Gly Ala Thr Ala Val Val His Leu Ala Ala Val Ala
           20
                                25
Ser Val Gln Ala Ser Val Asp Asp Pro Val Ser Thr Arg Gln Ser Asn
                            40
Phe Val Gly Thr Leu Asn Val Cys Glu Ala Met Arg Lys Ala Gly Val
                        55
Lys Arg Val Val Phe Ala Ser Ser Val Ala Val Tyr Gly Asn Asn Gly
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Glu Gly Ala Ser Ile Asp Glu Glu Thr Ile Lys Ala Pro Leu Thr Pro
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Tyr Ala
<210> 1259
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<212> DNA
<213> Homo sapiens
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agcgtggtgg acgtggctaa gggagtggtc cagggaggcc tggacaccac tcggtctgca
240
cttacgggca ccaaggaggc ggtgtccagc ggggtcacag gggccatgga catggctaag
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417
<210> 1260
<211> 133
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<213> Homo sapiens
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1
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                                    10
Ser Pro Phe Val Trp Ser Arg His Ser Glu Asn Val Arg Ser Cys Arg
                                25
                                                    30
Arg Gly Leu Thr Val Val Cys Ser Lys Met Ser Arg Ala Lys Asp Ala
                            40
       35
Val Ser Ser Gly Val Ala Ser Val Val Asp Val Ala Lys Gly Val Val
                        55
                                            60
Gln Gly Gly Leu Asp Thr Thr Arg Ser Ala Leu Thr Gly Thr Lys Glu
                    70
Ala Val Ser Ser Gly Val Thr Gly Ala Met Asp Met Ala Lys Gly Ala
                                                        95
                85
                                    90
Val Gln Gly Gly Leu Asp Thr Ser Lys Ala Val Leu Thr Gly Thr Lys
                                105
Asp Thr Val Ser Thr Gly Leu Thr Gly Ala Val Asn Val Ala Lys Gly
                                                125
        115
                            120
Pro Val Gln Ala Gly
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<212> DNA
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120tgaccetggc ggtcggctgg tggatcgaca acaaggtcag cgcccgcctg
ggcaaactgg taggcctgcg caacgccgac ctggcactgc aaggctttat cagcaccttg
240
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togaacatog ggotgaaagt gotgotgtto gtoagtgtgg cgtogatgat oggoattgag
accacctcgt tcgtcgcgga catcggtgct
330
<210> 1262
<211> 110
<212> PRT
<213> Homo sapiens
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Xaa Ala Arg Ala Val Arg His Gln Glu Met Asn Met Asp Leu Asn Ala
1
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Glu Val Asp Gln Leu Val Arg Gln Ser Gln Thr Trp Ile Pro Leu Ile
            20
                                25
Met Glu Tyr Gly Ser Arg Leu Leu Leu Ala Leu Leu Thr Leu Ala Val
                            40
Gly Trp Trp Ile Asp Asn Lys Val Ser Ala Arg Leu Gly Lys Leu Val
                       55
Gly Leu Arg Asn Ala Asp Leu Ala Leu Gln Gly Phe Ile Ser Thr Leu
                                       75
                    70
Ser Asn Ile Gly Leu Lys Val Leu Leu Phe Val Ser Val Ala Ser Met
                85
Ile Gly Ile Glu Thr Thr Ser Phe Val Ala Asp Ile Gly Ala
            100
                                105
<210> 1263
<211> 351
<212> DNA
<213> Homo sapiens
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120
tgcccagect getecattte gacgacgatg gtcgccgggt tcagtttett etcgctccac
gtcaacagac cgtcaccgtg gttgacgatc tcgccggtgg aggcgtcctt gacgacgatc
240
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<210> 1264
<211>, 100
<212> PRT
<213> Homo sapiens
<400> 1264
Met Pro Ser Leu Gly Ala Phe Phe Trp Val Asp Gly Glu Met Tyr Ser
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                                                        15
Leu Ala Arg Gly Gln Ile Val Val Lys Asp Ala Ser Thr Gly Glu Ile
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25
                                                   30
           20
Val Asn His Gly Asp Gly Leu Leu Thr Trp Ser Glu Lys Lys Leu Asn
                                              45
                           40
Pro Ala Thr Ile Val Val Glu Met Glu Gln Ala Gly Gln Gly Leu Ser
  50
                       55
Met Pro Leu Leu Gly Val Ala Gln Ala Ser Lys Leu Ile Ile Asp
                                       75
                   70
Ala Thr Gly Asn Val Glu Pro Phe Val Val Pro Gln Thr Asp Glu Val
                                   90
His Arg Pro Arg
           100
<210> 1265
<211> 318
<212> DNA
<213> Homo sapiens
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120
tgctgcaccg ccaaaattat ggacgcccc cgaccccact cgctctgacg ataccattgc
acagccgaaa gtgcaaccag cccaagcagt gggagatgac tcgatcatgt cggtcgatga
geotgatgea acceptecatg acatgecact caccacgaca ctegacaacg tgggtegete
300
agatecateg cgacgcgt
318
<210> 1266
<211> 99
<212> PRT
<213> Homo sapiens
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1
Asn Ala Arg Leu Val Glu Ser Ser Leu Arg Lys Leu Ile Lys Asp Thr
                               25
                                                   30
Asp Ala Ala Pro Pro Lys Leu Trp Thr Pro Pro Asp Pro Thr Arg
                           40
Ser Asp Asp Thr Ile Ala Gln Pro Lys Val Gln Pro Ala Gln Ala Val
Gly Asp Asp Ser Ile Met Ser Val Asp Glu Pro Asp Ala Thr Val His
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Asp Met Pro Leu Thr Thr Leu Asp Asn Val Gly Arg Ser Asp Pro
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Ser Arg Arg
<210> 1267
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120
aacctgtgtt tttgttcccc ttgtgaacac tcgtgggaaa tgccccacaa cctgtgtttt
tattcccctt gtgaacactc gtgggaaatg tcccatggcc cgtgtttccg tgcacctgcg
gatactcatc aaacaccagg ctgtcattgg ggacagggtg agctctggct gttggtgcag
300
catggtagga agagcaccaa gtcctggact ctgttgattt ata
343
<210> 1268
<211> 106
<212> PRT
<213> Homo sapiens
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Met Pro His Ser Leu Cys Phe Tyr Ser Pro Cys Glu His Leu Trp Glu
                                    10
1
                5
Leu Ser His Gly Pro Cys Phe Cys Ala Pro Ala Asp Thr Arg Gly Lys
            20
                                25
Cys Pro Thr Thr Cys Val Phe Val Pro Leu Val Asn Thr Arg Gly Lys
                            40
       35
Cys Pro Thr Thr Cys Val Phe Ile Pro Leu Val Asn Thr Arg Gly Lys
   50
                       55
                                            60
Cys Pro Met Ala Arg Val Ser Val His Leu Arg Ile Leu Ile Lys His
                    70
                                        75
65
Gln Ala Val Ile Gly Asp Arg Val Ser Ser Gly Cys Trp Cys Ser Met
                85
                                    90
Val Gly Arg Ala Pro Ser Pro Gly Leu Cys
            100
                                105
<210> 1269
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<212> DNA
<213> Homo sapiens
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180
gacctggggc gcacggccgg ttcaccgcaa cggtgatcct ggcagcggcc atggcggtgt
ccagcggcct cgcgcggcgg gtggcttgcc tcatgggcat gaagaattcg gacctcgggc
300
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ggttgggtga ggcggacaat ccctttcatc atgagcaatt ccgggagaat ggcgggccgc
acggggaaga gggttggatc ggcatggcct c
391
<210> 1270
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<212> PRT
<213> Homo sapiens
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Met Met Lys Gly Ile Val Arg Leu Thr Gln Pro Pro Glu Val Arg Ile
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Leu His Ala His Glu Ala Ser His Pro Pro Arg Glu Ala Ala Gly His
Arg His Gly Arg Cys Gln Asp His Arg Cys Gly Glu Pro Ala Val Arg
Pro Arg Ser Gly Cys Arg Ile Val Ala Lys Asp Gln Arg Phe Arg Thr
                        55
Arg Cys Arg Ser Pro Arg Arg Gly Gly Thr Pro Pro Gly Arg Ser Ala
                                        75
                    70
Arg Leu Gly Arg Pro Ala Pro Gly Arg Arg Pro Ala Met Arg Pro Ala
                                    90
                85
Gly Arg Arg Gln Pro Ser Ala Ala Pro Ile Ala Pro Asp Arg
                                                     110
                                105
            100
<210> 1271
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<212> DNA
<213> Homo sapiens
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120
cocceqttq cqtcaccata tggcccacta aagagttcac cagggttgat ttaccagccc
cggtcgaccc tcctaccacc gccagaagcg gcgcatcaat agtctctaag cgcggcaaaa
240
tatagtcgtt aagctggtta gcgatgcgtc gtgccagccc ggcctgagta atagcctccg
gcaaatccaa ggggaactgg gcctgacgca ggttgtgccg cagatcggtc aacgacagca
360
qtatetqete agtgtteatg gtgateette etggteacte gteaggeetg tggeggegee
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cggttgatga getegatetg aageggaeea ggateategt ceaacecaeg cacaatggeg
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tcacgaagat aagcaagatc tgtcccaacg cgcaggaact ctaacgtgtg ccaccaccgg
660
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661
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<211> 126
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<213> Homo sapiens
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Leu Arg Gln Ala Gln Phe Pro Leu Asp Leu Pro Glu Ala Ile Thr Gln
           20
                                25
Ala Gly Leu Ala Arg Arg Ile Ala Asn Gln Leu Asn Asp Tyr Ile Leu
                            40
Pro Arg Leu Glu Thr Ile Asp Ala Pro Leu Leu Ala Val Gly Gly
                       55
                                            60
Ser Thr Gly Ala Gly Lys Ser Thr Leu Val Asn Ser Leu Val Gly His
                    70
                                       75
Met Val Thr Gln Pro Gly Val Ile Arg Pro Thr Thr Thr Ser Pro Val
                85
                                    90
Leu Val His His Pro Asp Asp Ala Phe Trp Phe Asp Gly Asp Arg Val
           100
                                105
                                                    110
Leu Pro Thr Leu Val Arg Ser Gln Val Ala Ser Asn Asp Ala
                            120
<210> 1273
<211> 489
<212> DNA
<213> Homo sapiens
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120
ctcgacacgc ctgatgccgg tcgcgtcagc gagcttggcg gaacagtcga ggatggtgag
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300
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gatgagetgg caggetacet aagtegacat geacagetgt ggteggagtt tegtgetgea
420
teccagegte tteagegeet caacgaggat egegetgggg cegagatgga acgegaggtg
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489
<210> 1274
<211> 163
<212> PRT
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                                    10
Ala Glu Leu Leu Val Ala Arg Leu Glu Gly Glu Met His Ala His Ser
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                                                   30
Asp Pro Thr Pro Ser Pro Gln Pro Pro Glu Asp Ala Gly Leu Ile Asp
                          40
                                               45
        35
Val Ala Leu Lys Glu Ala Lys Lys Ala Phe Asp Glu Gly Lys Val Asp
                        55
                                           60
Leu Met Asp Lys Leu Asn Gln Glu Ile Leu Arg Leu Ala Asn Glu Phe
                                       75
                   70
Gly Ala Leu Gly Leu Glu Ser Ile Glu Leu Gly Ser Asp Ala Lys Met
                                    90
Ala Val Arg Lys Gly Asn Gln Lys Ser Ala Phe Ser Arg Leu Thr Pro
                               105
                                                   110
           100
Gly Glu Arg Leu Arg Leu Arg Ile Ala Thr Ala Ile Ala Leu Leu Arg
                           120
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<212> DNA
<213> Homo sapiens
<400> 1277
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gatgaatcac atgatgaaat tcaacatgat gg
392
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<213> Homo sapiens
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Gln Phe Gln Pro Arg Cys Val Ser Pro Ile Pro Val Ser Pro Thr Ser
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Arg Ile Gln Asn Pro Val Ala Phe Leu Ser Ser Val Leu Pro Ser Leu
                               25
           20
Pro Ala Ile Pro Pro Thr Asn Ala Met Gly Leu Pro Arg Ser Ala Pro
                           40
                                               45
Ser Met Pro Ser Gln Gly Leu Ala Lys Lys Asn Thr Lys Ser Pro Gln
                       55
                                           60
Pro Val Asn Asp Asp Asn Ile Arg Glu Thr Lys Asn Ala Val Ile Arg
                   70
                                       75
Asp Leu Gly Lys Lys Ile Thr Phe Ser Asp Val Arg Pro Asn Gln Gln
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90
Glu Tyr Lys Ile Ser Ser Phe Glu Gln Arg Leu Met Asn Glu Ile Glu
                              105
                                                   110
Phe Arg Leu Glu Arg Thr Pro Val Asp Glu Ser His Asp Glu Ile Gln
                           120
       115
His Asp
   130
<210> 1279
<211> 297
<212> DNA
<213> Homo sapiens
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tgggacgcga agttcgtcaa ggtggaccag gctacgctct tcgacctcat cctggctgcc
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297
<210> 1280
<211> 99
<212> PRT
<213> Homo sapiens
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Met Glu Ser Gln Thr Leu Arg His Met Ile Glu Asp Asp Cys Ala Asp
                                                       15
                5
Asn Gly Ile Pro Leu Pro Asn Val Asn Ser Arg Ile Leu Ser Lys Val
           20
                               25
                                                    30
Ile Glu Tyr Cys Asn Ser His Val His Ala Ala Ala Lys Pro Ala Asp
                           40
                                                45
       35
Ser Ala Ala Ser Glu Gly Gly Glu Asp Leu Lys Ser Trp Asp Ala Lys
                                           60
                       55
  50
Phe Val Lys Val Asp Gln Ala Thr Leu Phe Asp Leu Ile Leu Ala Ala
                   70
                                       75
Asn Tyr Leu Asn Ile Lys Gly Leu Leu Asp Leu Thr Cys Gln Thr Gly
               85
Ala Asp Met
<210> 1281
<211> 515
<212> DNA
<213> Homo sapiens
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tggcgtgcca ggtcatggct gcctggagcc cttctgagga gggccggctc aaccgaggac
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240
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300
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ggaagatgat ccagaagete tgeteeetee etttgetttt gaagaacaca ggagtgacae
420
gtggggaatc taccggctta atttcttctt agtaacaggc atagtaggat caaaaaattt
ttgcttctaa tttttaaaaa cattcaatgt gtaca
515
<210> 1282
<211> 135
<212> PRT
<213> Homo sapiens
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Met Gly Glu His Ser Phe Leu Asn Ser Phe Pro His Leu Tyr Arg Phe
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                 5
Glu Asn Tyr Gln Gln Leu Met Gly Arg Val Ala Cys Gln Val Met Ala
                                25
                                                     30
            20
Ala Trp Ser Pro Ser Glu Glu Gly Arg Leu Asn Arg Gly Arg Pro Pro
        35
                            40
                                                45
His Tyr Gln Val Gly Thr Ala Gly Arg Ser Arg His Pro His Pro Lys
                                            60
    50
                        55
Glu Val Gln Asn Arg Gln Gln Glu Glu Pro Asp Ser Asn Arg Val Gly
                    70
                                        75
Val Ile Arg Arg Ile Ala Lys Asp Val Thr Thr His Gln Leu Trp Glu
                                    90
                85
Pro Lys Gly Val Cys Gly Pro Leu Lys Gly Lys Met Ile Gln Lys Leu
            100
                                105
                                                    110
Cys Ser Leu Pro Leu Leu Leu Lys Asn Thr Gly Val Thr Arg Gly Glu
       115
                                                125
Ser Thr Gly Leu Ile Ser Ser
    130
                        135
<210> 1283
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<212> DNA
<213> Homo sapiens
<400> 1283
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tccactgcag aacttataca tatatgcttt gtgcacacaa agaaaaacag cagcccaaaa
gaatcccggc tggggctctt aggagggagg aaagttccca caggtaactc actggttaat
180
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```
tttaaagagc tcaggaaagg aaggaaggat ggctttttct cttgtgagtc aagacaaggt
cetgatgata acceteccag atcagaacgt aacttteaac ceaegagtge tgeten
<210> 1284
<211> 94
<212> PRT
<213> Homo sapiens
<400> 1284
Met Asn Cys Ser Val Trp Arg Thr Ser Trp Val Ala Leu Leu Arg Val
                                    10
Ser Thr Ala Glu Leu Ile His Ile Cys Phe Val His Thr Lys Lys Asn
Ser Ser Pro Lys Glu Ser Arg Leu Gly Leu Leu Gly Gly Arg Lys Val
                            40
Pro Thr Gly Asn Ser Leu Val Asn Phe Lys Glu Leu Arg Lys Gly Arg
Lys Asp Gly Phe Phe Ser Cys Glu Ser Arg Gln Gly Pro Asp Asp Asn
                                        75
65
                    70
Pro Pro Arg Ser Glu Arg Asn Phe Gln Pro Thr Ser Ala Ala
                85
                                    90
<210> 1285
<211> 526
<212> DNA
<213> Homo sapiens
<400> 1285
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gtgaaaggtc catctagagg aggtaaaaga cagggctgag ggaaaacgcc ttgtacagtc
aggatggcag atgtactctg tcagggaaga cagccccaca gaaaaggctc ggcttggcca
180
agaaqcaaca aaaqqqattc tacacctcag accagggagg gggaatgtgt acaaagattg
gatttactaa attcagagcc acagactttc aggtacttcg gtgaagatca gtgctctttc
aaacccacac ttcagaggca ggctttaaaa cgcctgactt ctgtcagggc cacaggctgg
gctgcccaaa gctcctacgg ggctggggga tccgagagag gacttcccac tagtccaaga
tgtggtgact agtttcaagc cagagattga ggagcagacc tgatgccctt tcgggcccct
gctaagaacc tgattcgagg aaaaggaagt gaagacagta acgcgt
526
<210> 1286
<211> 102
<212> PRT
<213> Homo sapiens
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Met Ala Asp Val Leu Cys Gln Gly Arg Gln Pro His Arg Lys Gly Ser
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                5
Ala Trp Pro Arg Ser Asn Lys Arg Asp Ser Thr Pro Gln Thr Arg Glu
                                                   30
          20
                               25
Gly Glu Cys Val Gln Arg Leu Asp Leu Leu Asn Ser Glu Pro Gln Thr
                                              45
       35
                          40
Phe Arg Tyr Phe Gly Glu Asp Gln Cys Ser Phe Lys Pro Thr Leu Gln
                       55
                                            60
  50
Arg Gln Ala Leu Lys Arg Leu Thr Ser Val Arg Ala Thr Gly Trp Ala
                 70
                                       75
Ala Gln Ser Ser Tyr Gly Ala Gly Gly Ser Glu Arg Gly Leu Pro Thr
                                   90
               85
Ser Pro Arg Cys Gly Asp
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<210> 1287
<211> 333
<212> DNA
<213> Homo sapiens
<400> 1287
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caggtgagaa gaaggtacaa caagcaagga aggccccagg aagccactgg gggtgtttga
gocattgaat attotggatt traggacatt totgtggotg actocactgo catcagagtt
catecacece aactecagee tgagagtget ggggeactgg geacteegga attetteaaa
getetgatge aacatgteee cagggtgtet gae
333
<210> 1288
<211> 105
<212> PRT
<213> Homo sapiens
Met Leu His Gln Ser Phe Glu Glu Phe Arg Ser Ala Gln Cys Pro Ser
                                   10
1
Thr Leu Arg Leu Glu Leu Gly Trp Met Asn Ser Asp Gly Ser Gly Val
           20
                               25
Ser His Arg Asn Val Leu Lys Ser Arg Ile Phe Asn Gly Ser Asn Thr
                           40
                                               45
      35
Pro Ser Gly Phe Leu Gly Pro Ser Leu Leu Val Val Pro Ser Ser His
                       55
                                           60
Leu Thr Ser Gly Leu Gln Ser Asn Trp Lys Ala Cys Pro Ala Pro Ala
                   70
                                       75
65
Thr Leu Pro Val Ala Cys Leu Ser Ala Ser Ser Cys Thr Ser Leu His
               85
                                    90
Leu Glu Leu Pro Leu Pro Phe Thr Arg
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105 100 <210> 1289 <211> 336 <212> DNA <213> Homo sapiens <400> 1289 acgcgtgtct gtgtacaggt ggaaggggat gggtatgaga tggtgcagcg tgtgcatggg cacggcgtat ggtgtgtgag tgcactcgtg tgccggagag ctgtaagctg ctggctgagt cctgcacggt ggaggaggca aggtggcccc tgcctgtggg cacagagccc accttccggt ccagecegag geceetttee cagageeeee teccaagggg ccataceace tgeateeeca agatggcgtg gggcgtccct ggtgcaggag caggggacag tcagggaggc gtgtggcgga cagtagcage eccecagece ecctecece aceggt 336 <210> 1290 <211> 89 <212> PRT <213> Homo sapiens <400> 1290 Met Val Cys Glu Cys Thr Arg Val Pro Glu Ser Cys Lys Leu Leu Ala 10 1 Glu Ser Cys Thr Val Glu Glu Ala Arg Trp Pro Leu Pro Val Gly Thr Glu Pro Thr Phe Arg Ser Ser Pro Arg Pro Leu Ser Gln Ser Pro Leu 35 Pro Arg Gly His Thr Thr Cys Ile Pro Lys Met Ala Trp Gly Val Pro 60 55 Gly Ala Gly Ala Gly Asp Ser Gln Gly Gly Val Trp Arg Thr Val Ala 65 Ala Pro Gln Pro Pro Ser Pro His Arg 85 <210> 1291 <211> 379 <212> DNA <213> Homo sapiens <400> 1291 tggccatcca cototgtcag otgttccggc aacccattca gatcattgtg gtagtaacga atettetgea aeggeeegge aeegteeaeg egageeagag gttgatagee tteateetea taaacgtaca ggcttgtctq gctgtgttta tgctcctgca ataaccgcaa accatcccag

gtaaaccggg tttcccccaa cggataccca tcactgccat gctcggtttt ttctatccga

240

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cgccccageg ggtcatacac catcctgacc acgctaccat cgtcattacg cacttcaacc
ageoggettt cagegteata egeaaacege tgeacgecac gettggeact gegetteteg
360
accatecgee caaacgegt
379
<210> 1292
<211> 121
<212> PRT
<213> Homo sapiens
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Met Val Glu Lys Arg Ser Ala Lys Arg Gly Val Gln Arg Phe Ala Tyr
Asp Ala Glu Ser Arg Leu Val Glu Val Arg Asn Asp Asp Gly Ser Val
            20
Val Arg Met Val Tyr Asp Pro Leu Gly Arg Arg Ile Glu Lys Thr Glu
                            40
His Gly Ser Asp Gly Tyr Pro Leu Gly Glu Thr Arg Phe Thr Trp Asp
                        55
                                            60
Gly Leu Arg Leu Leu Gln Glu His Lys His Ser Gln Thr Ser Leu Tyr
65
Val Tyr Glu Asp Glu Gly Tyr Gln Pro Leu Ala Arg Val Asp Gly Ala
                                   90
                85
Gly Pro Leu Gln Lys Ile Arg Tyr Tyr His Asn Asp Leu Asn Gly Leu
                                105
Pro Glu Gln Leu Thr Glu Val Asp Gly
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<210> 1293
<211> 340
<212> DNA
<213> Homo sapiens
<400> 1293
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aggetggtga egeetgagaa ggtgaacage egegacaegg egggeaggaa atccaeceeg
ctgcacttcg ccgcaggttt tgggcggaaa gacgtagttg aatatttgct tcagaatggt
gcaaatgtcc aagcacgtga tgatgggggc cttattcctc ttcataatgc atgctctttt
ggtcatgctg aagtagtcaa tctccttttg cgacatggtg cagaccccaa tgcttgagat
aattggaatt atactcctag agggtggagt gtgctcgcga
340
<210> 1294
<211> 98
<212> PRT
<213> Homo sapiens
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Xaa Pro Ala Ala Arg Glu Leu Phe Glu Ala Cys Arg Asn Gly Asp Val
               5
1
                                   10
Glu Arg Val Lys Arg Leu Val Thr Pro Glu Lys Val Asn Ser Arg Asp
                                25
                                                   30
           20
Thr Ala Gly Arg Lys Ser Thr Pro Leu His Phe Ala Ala Gly Phe Gly
                                               45
                           40
       35
Arg Lys Asp Val Val Glu Tyr Leu Leu Gln Asn Gly Ala Asn Val Gln
                       55
   50
Ala Arg Asp Asp Gly Gly Leu Ile Pro Leu His Asn Ala Cys Ser Phe
                   70
                                       75
Gly His Ala Glu Val Val Asn Leu Leu Leu Arg His Gly Ala Asp Pro
               85
Asn Ala
<210> 1295
<211> 351
<212> DNA
<213> Homo sapiens
<400> 1295
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acgtgtcgat gccctcgccc tcgatgcagt cggtcagcgg tacgacggcg ccgcgggagg
cgaaggtgcc gatctggctg cgctcggcgt agaccagcga cggcggttcg cccgacgcca
cggaggagag gaactgctgg atgtcgaggt caccctcgat cagcttgacc ttggcgtcgc
egageteete ettegeeegg tegageegea eegtegegat etegtegeeg geacegaage
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<210> 1296
<211> 75
<212> PRT
<213> Homo sapiens
<400> 1296
Gly Ser Arg Arg Pro Arg Arg Arg Thr Ser Pro Arg Pro Gly Pro Arg
Arg Gly Thr Pro Thr Cys Arg Cys Pro Arg Pro Arg Cys Ser Arg Ser
                                25
Ala Val Arg Arg Arg Gly Arg Arg Cys Arg Ser Gly Cys Ala
Arg Arg Arg Pro Ala Thr Ala Val Arg Pro Thr Pro Arg Arg Arg Gly
                       55
Thr Ala Gly Cys Arg Gly His Pro Arg Ser Ala
                   70
<210> 1297
<211> 356
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1120

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<212> DNA
<213> Homo sapiens
<400> 1297
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gacacccagg cctcaggccc catgggcacg ctccacgcca cggctcctac cagagggaca
gatacactet acaaateteg gggeecacea caccaagaag acaeggagga geeaacaaaa
gaaggaccat acgaaatgca cccccaaagc aaccaaccaa tccaagaaaa aatacgtctc
agggttctgt gggccctctt gcatgggctg ccctgccccc ctgttctggc ctggctcaag
caccttaccc cagcctgctc gaaagagccc tggctaccag agcagagcac tggcct
<210> 1298
<211> 91
<212> PRT
<213> Homo sapiens
<400> 1298
Met Gly Thr Leu His Ala Thr Ala Pro Thr Arg Gly Thr Asp Thr Leu
                                    10
                 5
1
Tyr Lys Ser Arg Gly Pro Pro His Gln Glu Asp Thr Glu Glu Pro Thr
            20
                                25
Lys Glu Gly Pro Tyr Glu Met His Pro Gln Ser Asn Gln Pro Ile Gln
                            40
       35
Glu Lys Ile Arg Leu Arg Val Leu Trp Ala Leu Leu His Gly Leu Pro
                                            60
                        55
Cys Pro Pro Val Leu Ala Trp Leu Lys His Leu Thr Pro Ala Cys Ser
                                        75
                    70
Lys Glu Pro Trp Leu Pro Glu Gln Ser Thr Gly
                85
<210> 1299
<211> 307
<212> DNA
<213> Homo sapiens
<400> 1299
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120
tgtctttgcc atatggcaac tgagaatgat cttggctacc ttctccagcc cgggagtcgg
gagttttctg gggtggggtc acgggtcttg cccggagttc gccctggcaa aggcctgtgc
240
cagtgatect ggageggage gaagtgttte egtgaetetg cageegeagt tettaggget
300
tccttag
307
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<210> 1300
<211> 90
<212> PRT
<213> Homo sapiens
<400> 1300
Met Ala Ala Gly Leu Arg Leu Trp Trp Leu Leu Ala Gly Cys Leu Ser
                                    10
1
                 5
Ser Leu Pro Cys Gly Ser Leu His Arg Ala Ala Ser Cys Val Phe Ala
                                                    30
                               25
            20
Ile Trp Gln Leu Arg Met Ile Leu Ala Thr Phe Ser Ser Pro Gly Val
                           40
        35
Gly Ser Phe Leu Gly Trp Gly His Gly Ser Cys Pro Glu Phe Ala Leu
                                            60
                        55
Ala Lys Ala Cys Ala Ser Asp Pro Gly Ala Glu Arg Ser Val Ser Val
                    70
Thr Leu Gln Pro Gln Phe Leu Gly Leu Pro
                85
<210> 1301
<211> 408
<212> DNA
<213> Homo sapiens
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qttqaqccta tttcctttga tgcagtatac gctgaaggtt tggaaatggc tgagttcttg
cgccctatgg tgtcagatac gattacactt ttgcatgacc ttagaaggtc tggcgcaaac
atcatgtttg aaggegegea agggtetttg ttggatgttg atcatggtae ttaccegtat
gtgacttcat ctaatacgac tgcgggcgga gcgccagcgg gaacaggttt tggtcctttg
tacttagatt atgtattagg tatcactaag gettataega etegegttgg ttetggaeet
ttccctactg agttgtttga cgaagatggt gagcgtcttg gtacgcgt
<210> 1302
<211> 136
<212> PRT
<213> Homo sapiens
<400> 1302
Leu Ser Lys Leu Lys Glu Val Leu Glu Phe Tyr Asn Phe Ile Leu Thr
                                   10
Asn Tyr Tyr Lys Val Glu Pro Ile Ser Phe Asp Ala Val Tyr Ala Glu
                                                   30
           20
                               25
Gly Leu Glu Met Ala Glu Phe Leu Arg Pro Met Val Ser Asp Thr Ile
        35
                          40
                                               45
Thr Leu Leu His Asp Leu Arg Arg Ser Gly Ala Asn Ile Met Phe Glu
```

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55
                                            60
    50
Gly Ala Gln Gly Ser Leu Leu Asp Val Asp His Gly Thr Tyr Pro Tyr
                                        75
                                                             80
Val Thr Ser Ser Asn Thr Thr Ala Gly Gly Ala Pro Ala Gly Thr Gly
                85
                                    90
Phe Gly Pro Leu Tyr Leu Asp Tyr Val Leu Gly Ile Thr Lys Ala Tyr
            100
                                105
Thr Thr Arg Val Gly Ser Gly Pro Phe Pro Thr Glu Leu Phe Asp Glu
        115
                            120
                                                125
Asp Gly Glu Arg Leu Gly Thr Arg
    130
<210> 1303
<211> 1037
<212> DNA
<213> Homo sapiens
<400> 1303
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gtttgccctg gggccctctc atcccacatc attttttcaa cccttcccca ncctttcnga
120
aatagggcca accccttaaa aancaaatnt tcanataaac ccttttccct ccaccctttt
cccatcccat cctttttccc tcacaaacac aaacaaaang cctctttcct ttgccatttc
240
cacteetttt ggaagaaaca ggeeetgtte eeteeetget caccaettea eecageteag
ctggcacaaa aatactgcca ccacaccttc accctgccta gcccaacctg gcagggcctc
ggagtagect gecagetaaa atacgggttg cecagataac tgtgaatgte agataagaat
cttctgggac aagtatgtcc catgccatat ttgggacata cttacactaa taaatttctg
tttatctgaa actcaaattt geetgggegt eetgtacttt tettaactaa atttggtgee
540
totacacaca aggtccctgg ggtggggggg cacaggagca agccccttcc caggctgggt
ccctgccggc atctcccaca ggccaggact ggccacccag atggagcccg tgccaggcag
coggogacag acggacaaag gotgotoagg agacactgoa cacottooto tttottgtot
gggggctcaa gaatccagac gcccacctcc ccgagcgagc accaagacag gaagccaacc
tgcaatgccc agcccactgc gaccacaggg ctctgccggg gtcctgccgg aacccagggt
teeggteeag aageeaggga taaatgeege tteteetata gggaeggtea gagtagagag
ggggaggcct acagteteae etgeagggag aggaagteet eggggeggge aegtggggg
cetgacaget ecgageacae ecggeeacag tgaccaegga etgeacaege agaageagte
1020
tggatcccac gcgtggc
1037
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<210> 1304
<211> 132
<212> PRT
<213> Homo sapiens
<400> 1304
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1
Gly Asp Thr Ala His Leu Pro Leu Ser Cys Leu Gly Ala Gln Glu Ser
                                                    30
           20
                                25
Arg Arg Pro Pro Pro Arg Ala Ser Thr Lys Thr Gly Ser Gln Pro Ala
       35
                            40
Met Pro Ser Pro Leu Arg Pro Gln Gly Ser Ala Gly Val Leu Pro Glu
                                            60
                        55
Pro Arg Val Pro Val Gln Lys Pro Gly Ile Asn Ala Ala Ser Pro Ile
                    70
Gly Thr Val Arg Val Glu Arg Gly Arg Pro Thr Val Ser Pro Ala Gly
                                    90
Arg Gly Ser Pro Arg Gly Gly His Val Gly Gly Leu Thr Ala Pro Ser
                                105
           100
Thr Pro Gly His Ser Asp His Gly Leu His Thr Gln Lys Gln Ser Gly
       115
                            120
Ser His Ala Trp
   130
<210> 1305
<211> 775
<212> DNA
<213> Homo sapiens
<400> 1305
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ccggccccgc tgcgggtgga gagacgtcgg gccctctacg ggtcctggta cgagtttttc
cogogototo agggtgotta tgtcgatgcg gacggtcact gggtttcagg tactttcgac
180
acctectggg agegeetgga egeegeeget gegatgggat ttgaegttgt ttaeetgeee
gegatecate ceatgggeea ageetteege aagggeaagg acaacaceet gaceecaggt
300
ccggacgatc cgggatcgcc gtgggccatc ggatcgtctg atggcggcca tgacaccatt
cacceegace taggeacett egacgacete gacegttteg tggeccaege teatgaceta
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cagcaccegg agtggttcac gaccegegtt gatggcacca tegectatge agaaaattea
cccaaaaagt atcaggacat ctacccgatc aacttcgaca atgaccctga cggtatctac
caggaatgct tgcggctgct ggagttatgg atctcccacg gcgtgacgat tttccgcgtc
660
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gataatccac ataccaagcc totgaattto tgggcotggc toatggaaca ggttcatcgt

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cgtcaccccg aggtcatctt cctggcagag gccttcaccc gtcccgagat gatca
<210> 1306
<211> 258
<212> PRT
<213> Homo sapiens
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Xaa Ala Phe Cys Glu Ala Met Arg Val Tyr Ala Pro Arg Pro Leu Thr
1
                               10
Ser Pro Thr Leu Pro Ala Pro Leu Arg Val Glu Arg Arg Arg Ala Leu
       20
                             25
Tyr Gly Ser Trp Tyr Glu Phe Phe Pro Arg Ser Gln Gly Ala Tyr Val
                         40
Asp Ala Asp Gly His Trp Val Ser Gly Thr Phe Asp Thr Ser Trp Glu
                     5.5
Arg Leu Asp Ala Ala Ala Met Gly Phe Asp Val Val Tyr Leu Pro
Ala Ile His Pro Met Gly Gln Ala Phe Arg Lys Gly Lys Asp Asn Thr
                      90
            85
Leu Thr Pro Gly Pro Asp Asp Pro Gly Ser Pro Trp Ala Ile Gly Ser
                   105
                                     110
Ser Asp Gly Gly His Asp Thr Ile His Pro Asp Leu Gly Thr Phe Asp
                       120
                                  125
Asp Leu Asp Arg Phe Val Ala His Ala His Asp Leu Gly Met Glu Val
                    135
                                      140
Ala Leu Asp Phe Ala Leu Gln Ala Ser Pro Asp His Pro Trp Val His
                150
                                    155
Gln His Pro Glu Trp Phe Thr Thr Arg Val Asp Gly Thr Ile Ala Tyr
             165
                               170
Ala Glu Asn Ser Pro Lys Lys Tyr Gln Asp Ile Tyr Pro Ile Asn Phe
         180
                          185
Asp Asn Asp Pro Asp Gly Ile Tyr Gln Glu Cys Leu Arg Leu Leu Glu
    195 200
                                 205
Leu Trp Ile Ser His Gly Val Thr Ile Phe Arg Val Asp Asn Pro His
                     215
                                       220
Thr Lys Pro Leu Asn Phe Trp Ala Trp Leu Met Glu Gln Val His Arg
225 230 235
Arg His Pro Glu Val Ile Phe Leu Ala Glu Ala Phe Thr Arg Pro Glu
                                250
Met Ile
<210> 1307
<211> 624
<212> DNA
<213> Homo sapiens
<400> 1307
cggccggtgg ggagtgccaa gccccaggct ccctgcatcc cacttctggt gaggtcagtg
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atgctgggca catgcggtca gggccctgtg cctgagccgt ggaactccac agccattcca
120
catgttcagt cccacacct gaggccaagg caccccgagt ccctgaggga gcaaggccct
180
qccacccgag gctgccgctg cagaggcaaa cagccccgag caaggcccgg caaccccagg
ctgtggctgc atggggcaaa cacagectgg cctgaggctg ccggccagtc ggggtggcca
taggetaacg agaagecagg geeteectee eeactggget ttecacaaaa acctgactaa
tgtccaggga cagccaaagg ccttgaggtc agctgggtgg aacacctttc ccctaccatc
ccgagatatt gtcttcttgg atggagtttt caaagccctc catgtggagg tctcgggatg
agaggcotcg gotgagotot gtgcagagga goaggaagot goagaatggg caccogcoto
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tececcaace ttggtetgae gegt
624
<210> 1308
<211> 100
<212> PRT
<213> Homo sapiens
<400> 1308
Met Ala Thr Pro Thr Gly Arg Gln Pro Gln Ala Arg Leu Cys Leu Pro
His Ala Ala Thr Ala Trp Gly Cys Arg Ala Leu Leu Gly Ala Val Cys
            20
                                25
Leu Cys Ser Gly Ser Leu Gly Trp Gln Gly Leu Ala Pro Ser Gly Thr
        35
                            40
                                                45
Arg Gly Ala Leu Ala Ser Gly Cys Gly Thr Glu His Val Glu Trp Leu
    50
                        55
Trp Ser Ser Thr Ala Gln Ala Gln Gly Pro Asp Arg Met Cys Pro Ala
                                        75
65
                    70
Ser Leu Thr Ser Pro Glu Val Gly Cys Arg Glu Pro Gly Ala Trp His
                85
                                    90
                                                         95
Ser Pro Pro Ala
           100
<210> 1309
<211> 563
<212> DNA
<213> Homo sapiens
<400> 1309
ntgatcateg ccaaccacca gtccaactat gacctgttcg tgtttggcac gggagtgccc
60
taccetacte tetetatege caaaaagage etgaaatggg tecegetett eggteagtte
ttctggctgg cgggcaatgt gttgattgac cggggcaacg cgcacaaggc gcgccgctca
180
```

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atgeteacea ceaeceacae ettgeageat aaagacaeat egatetgggt atttgeegaa
ggtacacgca acttcggtga aaccttgctg ccgttcaaga aaggtgcgtt ccagatggcg
300
attgccgcag gtgtgccgat cgtgcaggtg tgtgtcagca cgtatgtgaa gcacatgaag
ctcaatcgtt gggacagtgg cgatatttta attcgctcgt tgccgccaat tcctacgacc
ggactgacgt tggatgacat gccacggttg atggagacct gccgtcaaca aatgcgcgag
tgcattgagg caatggaccg cgagctggaa atcgtccctt gtaggaacga attggctcgc
gaagggcgtt aacgactacg cgt
<210> 1310
<211> 183
<212> PRT
<213> Homo sapiens
<400> 1310
Xaa Ile Ile Ala Asn His Gln Ser Asn Tyr Asp Leu Phe Val Phe Gly
1
                5
                                  10
Thr Gly Val Pro Tyr Arg Thr Val Cys Ile Gly Lys Lys Ser Leu Lys
                               25
Trp Val Pro Leu Phe Gly Gln Leu Phe Trp Leu Ala Gly Asn Val Leu
                                               45
       35
                           40
Ile Asp Arg Gly Asn Ala His Lys Ala Arg Arg Ser Met Leu Thr Thr
                       55
                                           60
Thr His Thr Leu Gln His Lys Asp Thr Ser Ile Trp Val Phe Ala Glu
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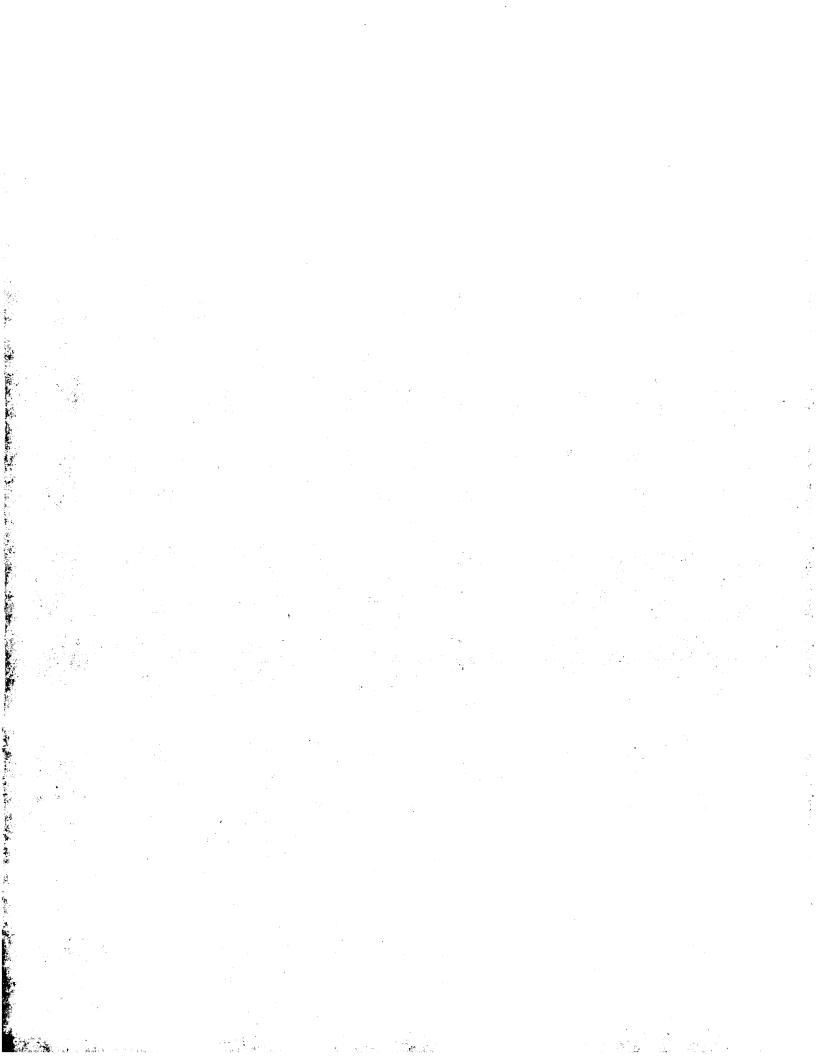
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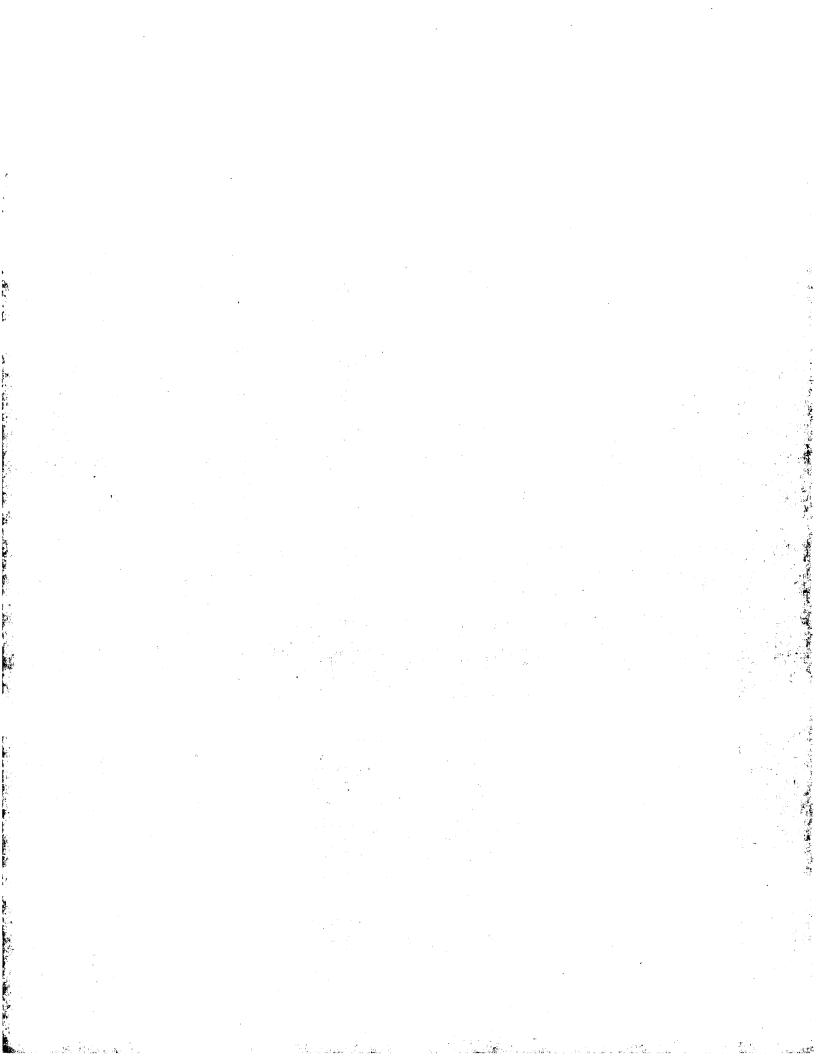
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Ser Gly Val Arg Glu Phe Thr Cys Glu Thr Cys Gly Lys Ser Phe Lys
              200
                                         205
Arg Lys Asn His Leu Glu Val His Arg Arg Thr His Thr Gly Glu Thr
                                     220
                    215
Pro Leu Gln Cys Val Ile Cys Gly Tyr Gln Cys Arg Gln Arg Ala Ser
                                 235
           230
Leu Asn Trp His Met Lys Lys His Thr Ala Glu Val Gln Tyr Asn Phe
            245
                              250
Thr Cys Asp Ala Cys Gly Lys Arg Phe Glu Lys Leu Asp Ser Val Lys
         260
                           265
Phe His Thr Leu Lys Ser His Pro Asp His Lys Pro Thr
                        280
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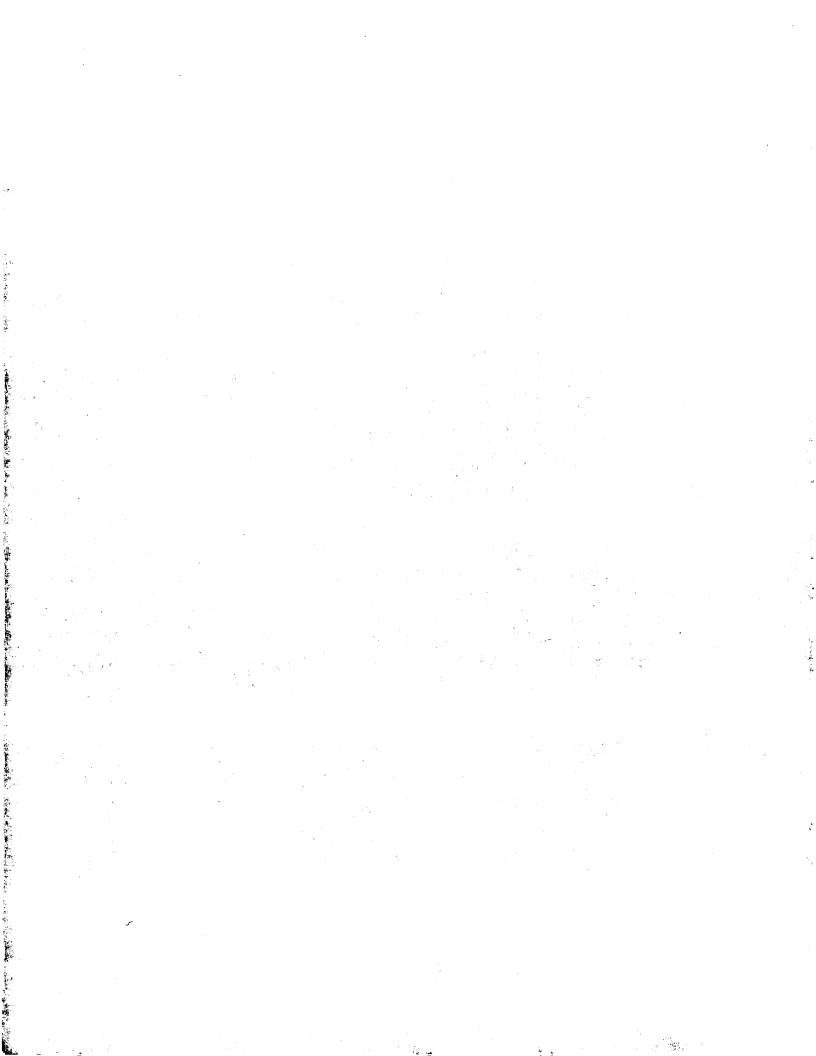
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gagtcgatgc caagtcagag agcagttggg gaggaaccca gaagccctgg gatggtgtct
gcatgggaat gtgtagggag gcagccacaa tgggcctggg ccttcctttc tctccttcct
300
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acacacacag gtgggatgca ggtatccggg aagctcatag aagctgccac gctgctggag
tttgcctcat acaggagcgt gggcatgccc cgcgtggagt tgtgctgtgt gtgtgcatat
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538
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<211> 169
<212> PRT
<213> Homo sapiens
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Met Arg Ala Trp Lys Gln Met Ala Ser Gln Ser Ser Ile Trp Glu Asp
                                   10
Ser Gln Asn Ser Ala Gly Ser Arg Gly Trp Gly Met Ala Pro Ala Glu
                                25
                                                    3.0
           20
Cys Val Asn Gly Ser Leu Gly Ala Phe Leu Pro Leu Gly Ala Pro Trp
                                                45
                            40
       35
Glu Ser Gly Val Asp Ala Lys Ser Glu Ser Ser Trp Gly Gly Thr Gln
                                            60
                        55
Lys Pro Trp Asp Gly Val Cys Met Gly Met Cys Arg Glu Ala Ala Thr
                                        75
                    70
65
Met Gly Leu Gly Leu Pro Phe Ser Pro Ser Cys Pro Pro Pro Pro Ser
                                    90
                85
Pro Ser Leu Leu Pro Ser Phe Trp Lys Pro Ser Thr Gly Gly Asn Thr
                                105
           100
His Arg Trp Asp Ala Gly Ile Arg Glu Ala His Arg Ser Cys His Ala
       115
                           120
                                                125
Ala Gly Val Cys Leu Ile Gln Glu Arg Gly His Ala Pro Arg Gly Val
                       135
Val Leu Cys Val Cys Ile Cys Met Val Val Cys Ala Trp Gly Trp Gly
                   150
                                        155
Ile Leu Thr Trp Gly His Ser Gln Ser
                165
```

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<210> 1321
<211> 1292
<212> DNA
<213> Homo sapiens
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cggaacgcag caatgatecg gcgtcagtge tetcagteac cgcaggatga cccggtgcaa
cgcccggatc gctcacggta cgcaacgacg aagcagggat cgctcagacc cgggcacgtc
atcgtcaaga agatttacaa caacaatgtc cttctcggcg tcaacggttc ggggaccgaa
atggtcgtca atgctcgcgg tatcgcctac ggacgacacc gcggggagat cgtcgatgcc
togtoggccc agcgatatgt cgcagagggt gcctatcgca cgaccgccat cgcatcactg
ctaacgaacg ccactcacac cgaggtgcga gtggcacagg caatcgtcga attggcgcgc
420
gaagagetgg geactececa tgeeegaegg atgatgetge ceatectega teacetegte
gcagctgtgc accgagctaa gcagggggcc gtcatcgatt ttcccctgga atgggaagtc
cgtcagctct atcccgatga ggcggaactg ggccgacgcg ctgtcgaaat cgtcgacggt
getetegaaa teeatttgca accegaggaa tgggtggcat tetecetgea etteateaat
cageggtggg acagtagaga egtttegegg accatgtega tgactcagae gatetgegae
gttttcaccg agctggagga cctgtggcac gttgagatcg accgttcgtc catgagcgca
tecegetteg teacceacet tegetatetg ttegeteggg eeteggacaa caageagete
840
teteacgttg acctggacat tgtgggacte atgteagate getacecaga agceacattg
gcagctagcc aagtggccga gcacatatcg aaagcaatcg gcaacgacct gacggaagcc
gaaatcaact acatcgcctt acacaccacc cggctctaca acgaggtgat ggggatggat
1020
gactgacgat cgcgcacctg ttaaggctca tcggtagtgg gcaatacaca aaatggcgat
1080
gacetteetg ceggaaagee ageaceaaag teacecagat caaaatteag atgegtgeet
1140
aattcccacc ccgacatcca agaggtcagg ggggggttgt tggggggtggt gggtgggggt
gggggggttt gcatgctcag gggtgggggc tttgttgaag ccatcatgaa gttgcaaacc
1260
caggactgtt ccactagtaa agcccctgcc tt
1292
<210> 1322
<211> 317
<212> PRT
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130
                       135
                                            140
Thr Arg
145
<210> 1331
<211> 453
<212> DNA
<213> Homo sapiens
<400> 1331
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catcttctgg ccggcatcgg acgcatcgaa tccggtcacg ccaacggcgg caagacgacc
teggtgggta egaaegteae eecgateete ggeeceatee tegaeggaeg getggeagge
aacgaagtca ttcgggacac cgacaagggc aatcgacggc gacccactca cgaccgcgcc
gtcgggccga tgcagttcat tccggccacc tgggccggat atgccagcga cggcaacggg
300
gacggaatca aggaccccaa caacgtcttc gatgcggcac tctcggcagc gaagtacctc
tgcagcggcg gactcaacct gcgcgatgtc gcccaggaga ccaaagctgt tctgcgatac
420
aacaactegg cegettacge ageaaacgtg ate
<210> 1332
<211> 151
<212> PRT
<213> Homo sapiens
<400> 1332
Ala Tyr Arg Ser Ala Glu Leu Val Met Met Thr Glu Ala Pro Gly Cys
                                   10
                5
Gly Ile Pro Trp His Leu Leu Ala Gly Ile Gly Arg Ile Glu Ser Gly
           20
                               25
                                                    30
His Ala Asn Gly Gly Lys Thr Thr Ser Val Gly Thr Asn Val Thr Pro
                           40
       35
Ile Leu Gly Pro Ile Leu Asp Gly Arg Leu Ala Gly Asn Glu Val Ile
                                            60
   50
                       55
Arg Asp Thr Asp Lys Gly Asn Arg Arg Pro Thr His Asp Arg Ala
                                        75
                   70
65
Val Gly Pro Met Gln Phe Ile Pro Ala Thr Trp Ala Gly Tyr Ala Ser
               85
                                   90
Asp Gly Asn Gly Asp Gly Ile Lys Asp Pro Asn Asn Val Phe Asp Ala
           100
                               105
Ala Leu Ser Ala Ala Lys Tyr Leu Cys Ser Gly Gly Leu Asn Leu Arg
                                               125
       115
                           120
Asp Val Ala Gln Glu Thr Lys Ala Val Leu Arg Tyr Asn Asn Ser Ala
                       135
Ala Tyr Ala Ala Asn Val Ile
145
                   150
```

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<211> 540
<212> DNA
<213> Homo sapiens
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ggcacagete gteggteaag atgggtetag tgetgetegt atggeggegg aggeateege
gegaaggget aaageggatg gactaageea gettgtcate gatgtcaatg gagacgeegt
cagcgtcgcg acggaaatca cccggcctac tcgtctatta gcccttattg gactaaccga
agtacacggt cgggcgagcg aaatgtgtat tttgctggct cgctgaggcc gttgcagcga
tacaatgatg aggtgtctaa gtattttccg gtccacccgg agaacccgca gcagcgttct
ctcaatcaga togtogacat cotgcaccat ggoggtotta togcotacco gacagacacg
ggttatgcct tcggtgcccg gntagggaat aaggatgccg tggaccggat tcgcaaactt
480
egecaqttat ttgacaagca teacttcace etggtcatga gecagtttge geaggttgge
540
<210> 1334
<211> 70
<212> PRT
<213> Homo sapiens
<400> 1334
Val His Pro Glu Asn Pro Gln Gln Arg Ser Leu Asn Gln Ile Val Asp
                                                        15
                                    10
Ile Leu His His Gly Gly Leu Ile Ala Tyr Pro Thr Asp Thr Gly Tyr
                                25
                                                    30
           20
Ala Phe Gly Ala Arg Xaa Gly Asn Lys Asp Ala Val Asp Arg Ile Arg
       35
Lys Leu Arg Gln Leu Phe Asp Lys His His Phe Thr Leu Val Met Ser
                                            60
   50
Gln Phe Ala Gln Val Gly
                    70
<210> 1335
<211> 748
<212> DNA
<213> Homo sapiens
<400> 1335
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gtgaatgeca agaagaageg tegtgaggte etegateagg ceteeggtta eegtggteag
cgctcgcgcc tgtaccgcaa ggccaaggag cagaccctcc attcggccac ttattcgttc
180
```

```
cgtgaccgtc gtgctaagaa gggtgacttc cgctcgctgt ggatccagcg catcaatgct
qcttcccqtq cccaqqqcat qacctacaac cgtttcatca acggtctgaa gaacgctggc
gtcgaggtcg accgcaagat gctcgctgag cttgccgtct ccgacattaa cgccttcaac
360
agcetggteg aggtegetaa ggetageeag eegeagaacg etgetgeetg agatggeeat
420
gactggcggg ccgaacgacg actatttggg atgggatcgc atctcgaagg ggtcattgcg
480
tteggeeegt egtettteat eteggegegg aegegatgag teegggetgt tettggtaga
aggtgcgcag gcagttcgtg aagccctagc atggccgggt aaagtcaatt tgttggcaac
ctcggaccca gctcgcgatg ctgagcatgt cgaggtggct acatgtcgtg gcgttcgggt
cgtggtgetc actgacgagg atgtcaatgc gctttctgat accgtcacca gtcaggggat
720
cttcgcggta tgtcggcagg ttacgcgt
748
<210> 1336
<211> 136
<212> PRT
<213> Homo sapiens
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Xaa Leu Ile Leu Phe Phe Pro Ile Pro Ile Pro Pro Leu Ser Asp Arg
                                    10
Val Lys Arg Ser Val Asn Ala Lys Lys Lys Arg Arg Glu Val Leu Asp
Gln Ala Ser Gly Tyr Arg Gly Gln Arg Ser Arg Leu Tyr Arg Lys Ala
        35
                            40
Lys Glu Gln Thr Leu His Ser Ala Thr Tyr Ser Phe Arg Asp Arg Arg
                        55
                                            60
Ala Lys Lys Gly Asp Phe Arg Ser Leu Trp Ile Gln Arg Ile Asn Ala
                                        75
65
                    70
Ala Ser Arq Ala Gln Gly Met Thr Tyr Asn Arg Phe Ile Asn Gly Leu
                85
                                    90
Lys Asn Ala Gly Val Glu Val Asp Arg Lys Met Leu Ala Glu Leu Ala
            100
                                105
                                                    110
Val Ser Asp Ile Asn Ala Phe Asn Ser Leu Val Glu Val Ala Lys Ala
                                                125
       115
                            120
Ser Gln Pro Gln Asn Ala Ala Ala
    130
<210> 1337
<211> 364
<212> DNA
<213> Homo sapiens
<400> 1337
acgcgtgagg ccaggccact gggcaccgcc gttagccagg gcagcctcct tcagtggtca
60
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aggeagacte ageteatggg egageatgte agtgaaggge acageaagge teacgagtgg
geetettgee teatggteag tgtgggteag tgettteget gtatgagaet acagggttte
180
totgcctcac catgggggac gattgggtct gggtcacttc ctgctgtggg acctgtcctg
240
ggcactgcag gatgtggggc agggctccta cgtgccagct accagatgcc agcagcaccc
300
ccagaagtga caaccacaac catctccagg tgttgccagt gtcccctggg ggtcagagtg
360
gccc
364
<210> 1338
<211> 96
<212> PRT
<213> Homo sapiens
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Met Gly Glu His Val Ser Glu Gly His Ser Lys Ala His Glu Trp Ala
                                    10
                                                        15
1
                 5
Ser Cys Leu Met Val Ser Val Gly Gln Cys Phe Arg Cys Met Arg Leu
                                25
                                                    30
            20
Gln Gly Phe Ser Ala Ser Pro Trp Gly Thr Ile Gly Ser Gly Ser Leu
                                                45
        35
                            40
Pro Ala Val Gly Pro Val Leu Gly Thr Ala Gly Cys Gly Ala Gly Leu
                        55
                                            60
Leu Arg Ala Ser Tyr Gln Met Pro Ala Ala Pro Pro Glu Val Thr Thr
                                        75
                    70
Thr Thr Ile Ser Arg Cys Cys Gln Cys Pro Leu Gly Val Arg Val Ala
                85
                                    90
<210> 1339
<211> 653
<212> DNA
<213> Homo sapiens
<400> 1339
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tgggtcqtca ggtacgccga caagtacctc ggcgacgttg agttcggcta cgagtactct
ccggagatgt ttagccagac ccgcacggac ttcgctatcg acgtctgtca ctccgtgatg
180
gacgtgtggc agccggggcc aggccgtgag attatcctta atctgccggc taccgtcgag
240
atgagtactc cgaacaccta cgccgaccaa atcgagtact tetgccgcaa tatccgtgat
cgtgagcacg tgtgcgtctc tttgcacccg cacaatgatc gtggcacggc gatcgcggcc
360
gecgagtteg egeagatgge gggegeegat egegtegagg getgtttett tggeeeegge
420
gagegeeegg geaeegtega eetggteaee etgggeatga acetegteag eeagggagtt
480
```

```
gacgeeggta tegaettete egacatgeee aagateegee geaeegtega gtaetgeaee
tgtctgccag taccggcccg ccagccctac tccggcgatc tggtcttcac cgccttctcc
ggttcccacc aggacgccat caagaagggt ctggaagacc tggcccggcg cgc
653
<210> 1340
<211> 217
<212> PRT
<213> Homo sapiens
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Arg Val Val Phe Asn Ile Asp Glu Lys Gln Cys Ile Asp Leu Ala His
Arg Gly Thr Glu Trp Val Val Arg Tyr Ala Asp Lys Tyr Leu Gly Asp
                               25
                                                   30
           20
Val Glu Phe Gly Tyr Glu Tyr Ser Pro Glu Met Phe Ser Gln Thr Arg
       35
                           40
Thr Asp Phe Ala Ile Asp Val Cys His Ser Val Met Asp Val Trp Gln
                                           60
   50
Pro Gly Pro Gly Arg Glu Ile Ile Leu Asn Leu Pro Ala Thr Val Glu
                                      75
                   70
Met Ser Thr Pro Asn Thr Tyr Ala Asp Gln Ile Glu Tyr Phe Cys Arg
                                   90
Asn Ile Arg Asp Arg Glu His Val Cys Val Ser Leu His Pro His Asn
           100
                               105
Asp Arg Gly Thr Ala Ile Ala Ala Ala Glu Phe Ala Gln Met Ala Gly
                           120
                                               125
Ala Asp Arg Val Glu Gly Cys Phe Phe Gly Pro Gly Glu Arg Pro Gly
                       135
                                          140
   130
Thr Val Asp Leu Val Thr Leu Gly Met Asn Leu Val Ser Gln Gly Val
                                     155
                   150
Asp Ala Gly Ile Asp Phe Ser Asp Met Pro Lys Ile Arg Arg Thr Val
                                   170
               165
Glu Tyr Cys Thr Cys Leu Pro Val Pro Ala Arg Gln Pro Tyr Ser Gly
                                                   190
                              185
           180
Asp Leu Val Phe Thr Ala Phe Ser Gly Ser His Gln Asp Ala Ile Lys
                           200
                                               205
Lys Gly Leu Glu Asp Leu Ala Arg Arg
                       215
   210
<210> 1341
<211> 666
<212> DNA
<213> Homo sapiens
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accegitteet gattteette tteggagtett caccactate agcagtegact ccattettt
gcaaagtttc ttgccttgct ttgatcatat tttcacaact ggattcccaa cagaagtgtg
gcaatetgta atagaaaagt tggcaaagaa aggattatgg cattcattte tgettetgte
```

```
agcaaaaaaa gaccgattac caagaaatat tcatgtccca gagttatcac tgaaaagtct
240
ctttgagaaa tacgttttca ttggacttta tgagaagatg gaacaagtgc ccaagttagt
300
ccagtggctc atctccattg gtgcaagtgt tgagactata ggaccgtatc cccttcatgc
360
cctcatgcga ctctgtatcc aagccagaga aaaccatctt ttccggtggt taatggatca
caagecegag tggaaaggee geattaacea gaaggatggg gatggetgea etgteetgea
cgtcgtcgct gcccactccc caggatacct cgttaagcga caaacagagg atgtgcagat
gctcctgcgc tttggggcag atcccacttt gctggatcga cagtctcggt ctgttgtgga
tgtcctgaag aggaataaga acttcaaagc catcgagaaa atcaacagtc acttagaaaa
660
gctagc
666
<210> 1342
<211> 209
<212> PRT
<213> Homo sapiens
<400> 1342
Met Ser Ser Asp Ser Ile Val Leu Gln Ser Phe Leu Pro Cys Phe Asp
                                    10
His Ile Phe Thr Thr Gly Phe Pro Thr Glu Val Trp Gln Ser Val Ile
                                25
Glu Lys Leu Ala Lys Lys Gly Leu Trp His Ser Phe Leu Leu Ser
                            40
       35
Ala Lys Lys Asp Arg Leu Pro Arg Asn Ile His Val Pro Glu Leu Ser
                                            60
                        55
Leu Lys Ser Leu Phe Glu Lys Tyr Val Phe Ile Gly Leu Tyr Glu Lys
                                        75
                    70
Met Glu Gln Val Pro Lys Leu Val Gln Trp Leu Ile Ser Ile Gly Ala
                                    90
               85
Ser Val Glu Thr Ile Gly Pro Tyr Pro Leu His Ala Leu Met Arg Leu
           100
                                105
                                                    110
Cys Ile Gln Ala Arg Glu Asn His Leu Phe Arg Trp Leu Met Asp His
                           120
                                                125
       115
Lys Pro Glu Trp Lys Gly Arg Ile Asn Gln Lys Asp Gly Asp Gly Cys
                                            140
                        135
Thr Val Leu His Val Val Ala Ala His Ser Pro Gly Tyr Leu Val Lys
                                       155
                   150
Arg Gln Thr Glu Asp Val Gln Met Leu Leu Arg Phe Gly Ala Asp Pro
                                                        175
                                   170
Thr Leu Leu Asp Arg Gln Ser Arg Ser Val Val Asp Val Leu Lys Arg
                                185
           180
Asn Lys Asn Phe Lys Ala Ile Glu Lys Ile Asn Ser His Leu Glu Lys
                                                205
                            200
Leu
```

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<210> 1343
<211> 270
<212> DNA
<213> Homo sapiens
<400> 1343
ccggaaatgt gccgagttct cctgacgcac gaagtgatgt gtagtcgatg ctgcgaaaag
aaaagctgtg gaaaccgaaa tgagactcca tcggacccag tcataattga cagattcttt
ttaaaatttt tcctcaagtg caatcagaat tgtttgaaaa cagcaggaaa cccaagggac
atgagacggt ttcaggttgt gttgtcaaca acggtgaatg tggatggaca cgtcctggct
gtttctgaca acatgtttgt tcataacaac
270
<210> 1344
<211> 90
<212> PRT
<213> Homo sapiens
<400> 1344
Pro Glu Met Cys Arg Val Leu Leu Thr His Glu Val Met Cys Ser Arg
                 5
                                    10
1
Cys Cys Glu Lys Lys Ser Cys Gly Asn Arg Asn Glu Thr Pro Ser Asp
           20
                                25
Pro Val Ile Ile Asp Arg Phe Phe Leu Lys Phe Phe Leu Lys Cys Asn
                            40
Gln Asn Cys Leu Lys Thr Ala Gly Asn Pro Arg Asp Met Arg Arg Phe
                        55
Gln Val Val Leu Ser Thr Thr Val Asn Val Asp Gly His Val Leu Ala
                    70
                                        75
Val Ser Asp Asn Met Phe Val His Asn Asn
                85
<210> 1345
<211> 402
<212> DNA
<213> Homo sapiens
<400> 1345
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ageggeaceg acaacacega ettetacgae cegaceaagg cegacaaceg teteacetae
cgccagacgg gcgtcgtcac gccctatgcc ggcatcgtct acgacctgaa tgacatctgg
teggtgtaca ceagetacae caagatetae aageegeaga acageaagga egeegaeege
240
aaqttqctcg atccgattga aggtqacacc tacgaagccg ggctcaaggc agcgtttttc
gacggccgcc tgaacgccag ttttgccgca ttccgcatcg aacaggacaa cgtcgcacag
360
```

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tacgtttccg ggtttgagac cgactcgtgt atcgcccatt gc
402
<210> 1346
<211> 134
<212> PRT
<213> Homo sapiens
<400> 1346
Thr Arg Leu Lys Pro Thr Asp Asp Leu Ser Val Ile Leu Gly Thr Arg
                                    10
Val Ser Asn Phe Ser Gly Thr Asp Asn Thr Asp Phe Tyr Asp Pro Thr
                                25
Lys Ala Asp Asn Arg Leu Thr Tyr Arg Gln Thr Gly Val Val Thr Pro
        35
                                                45
                            40
Tyr Ala Gly Ile Val Tyr Asp Leu Asn Asp Ile Trp Ser Val Tyr Thr
                        55
Ser Tyr Thr Lys Ile Tyr Lys Pro Gln Asn Ser Lys Asp Ala Asp Arg
                    70
                                        75
65
Lys Leu Leu Asp Pro Ile Glu Gly Asp Thr Tyr Glu Ala Gly Leu Lys
Ala Ala Phe Phe Asp Gly Arg Leu Asn Ala Ser Phe Ala Ala Phe Arg
                               105
            100
                                                    110
Ile Glu Gln Asp Asn Val Ala Gln Tyr Val Ser Gly Phe Glu Thr Asp
       115
                            120
Ser Cys Ile Ala His Cys
   130
<210> 1347
<211> 415
<212> DNA
<213> Homo sapiens
<400> 1347
naccaccttc tgggcaggct ctcattcttt cattccaaga agcatttatt aaagactggc
tagggcgagg gaacccagct aggggctggg gataaaaaat aagaaataac tgaaggacct
tgctcttaag gaactccatc ttactgggtg gagccaaacg agaaaagaga gctcgggagg
180
gcaccaaagc ggtcttgccg aaattgcctg aggcagggga aggggcacgc tttctgaaaa
accecccaa accgatteca ggaageccaa agggeggece etetgecege ageactgeet
tcacgtttac ttccatcccg gcctcctcct tcccctaagg cttggcatgc aacatccctg
cttctcaccc accttttatt taagactcct attatctgca cacaatggaa gttag
415
<210> 1348
<211> 105
<212> PRT
<213> Homo sapiens
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<400> 1348
Met Glu Val Asn Val Lys Ala Val Leu Arg Ala Glu Gly Pro Pro Phe
Gly Leu Pro Gly Ile Gly Leu Gly Gly Phe Phe Arg Lys Arg Ala Pro
                                                    30
            20
                                25
Ser Pro Ala Ser Gly Asn Phe Gly Lys Thr Ala Leu Val Pro Ser Arg
        35
                            40
Ala Leu Phe Ser Arg Leu Ala Pro Pro Ser Lys Met Glu Phe Leu Lys
                        55
                                            60
Ser Lys Val Leu Gln Leu Phe Leu Ile Phe Tyr Pro Gln Pro Leu Ala
                    70
Gly Phe Pro Arg Pro Ser Gln Ser Leu Ile Asn Ala Ser Trp Asn Glu
                                    90
Arg Met Arg Ala Cys Pro Glu Gly Gly
            100
<210> 1349
<211> 924
<212> DNA
<213> Homo sapiens
<400> 1349
geegggateg teacaceaea geaggtegeg ttaceceatg aegtetteeg tgagettgge
getcagaegg tcatgegtte gategeegaa aagettggee tteeggteat egttaageeg
120
gcacgtgggg gctcaagcct cggcgtcaca aaagtcgatg gcgtcgacga tcttcctcag
geogtegega acgcetatge etatgacgae atggttgtag tegaggaatt cattgtggge
240
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Val Thr Lys Val Asp Gly Val Asp Asp Leu Pro Gln Ala Val Ala Asn
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Ala Tyr Ala Tyr Asp Asp Met Val Val Val Glu Glu Phe Ile Val Gly
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Asn Glu Leu Ala Ile Gly Met Ile Thr Thr Ser Glu Gly Thr Arg Val
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Leu Pro Ala Val Glu Ile Arg Pro Val Gly Gly Val Tyr Asp Tyr Ser
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Ala Met Tyr Thr Gly Gly Glu Thr Arg Leu Thr Ala Pro Ala Asp Ile
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Ser Asp Thr Ala Ala Gln Thr Ala Thr Ala Met Ala Arg Val Val Gln
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Lys Glu Leu Asp Phe Ser Gly Ile Ser Arg Val Asp Ala Ile Val Asp
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Glu Ser Gly Arg Pro Val Phe Leu Glu Ala Gly Ala Ala Pro Gly Met
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                                  170
Thr Ala Thr Ser Leu Val Pro Val Ala Met Lys Ala Ala Gly Leu Asp
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Leu His Pro Gly Leu Leu Ile Val Asp His Ile His Phe Gln Tyr Asn
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tcatccatct gcgactacac caccttccag atcgaggtca ccaaacatta tcggaagcag
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Ser Gln Leu Ile Thr Leu Thr Pro Thr Pro Pro Pro Val Thr Arg Ile
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            20
Val Arg Gly Ile Gly Gln Pro Arg Gly Asn Met Leu Leu Val Gly Ile
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45
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Gly Gly Ser Gly Arg Gln Ser Leu Ala Arg Leu Ala Ser Ser Ile Cys
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Asp Tyr Thr Thr Phe Gln Ile Glu Val Thr Lys His Tyr Arg Lys Gln
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Glu Phe Arg Asp Asp Ile Lys Arg Leu Tyr Arg Gln Ala Gly Val Glu
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Leu Lys Thr Thr Ser Phe Ile Phe Val Asp Thr Gln Ile Ala Asp Glu
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Ser Phe Leu Glu Asp Ile Asn Asn Ile Leu Ser Ser Gly Glu Val Pro
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His Leu Phe Arg Pro Asp Glu Phe Glu Glu Ile Gln Ser His Ile Ile
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Asp Gln Ala Arg Val Glu Gln Val Pro Glu Ser Ser Asp Ser Leu Phe
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Thr Ala Asn Ser Ala Asn Glu Cys Gln Ser Cys Asn Cys Tyr Gly His
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Ala Thr Asp Cys Tyr Tyr Asp Pro Glu Val Asp Arg Arg Arg Ala Ser
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Gln Ser Leu Asp Gly Thr Tyr Gln Gly Gly Gly Val Cys Ile Asp Cys
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Gln His His Thr Ala Gly Val Asn Cys Glu Arg Cys Leu Pro Gly Phe
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Tyr Arg Ser Pro Asn His Pro Leu Asp Ser Pro His Val Cys Arg Arg
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Cys Asn Cys Glu Ser Asp Phe Thr Asp Gly Thr Cys Glu Asp Leu Thr
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Gly Arg Cys Tyr Cys Arg Pro Asn Phe Ser Gly Glu Arg Cys Asp Val
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Ser Ser Asn Asp Thr Arg Glu Gln Val Leu Pro Ala Gly Gln Ile Val
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Asn Cys Asp Cys Ser Ala Ala Gly Thr Gln Gly Asn Ala Cys Arg Lys
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Asp Pro Arg Val Gly Arg Cys Phe Ala Asn Pro Asn Phe Gln Gly Thr
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Ser Leu His Ala
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Cys Glu Leu Leu Ala Ala Val Phe Cys Ala Arg Ala Cys Leu Ala Trp
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Leu Gln Glu Ser Leu Ala His Arg Ala Ser Ala Ser Val Lys Ser Gln
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Thr Ser Leu Val Ile Val Val Thr Ile Pro Leu Ile Pro Val Phe
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Met Ala Leu Ile Gly Trp Arg Thr Glu Ala Ala Val Ala Lys Arg Phe
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Lys Val Ala Thr Arg Leu Ala Asn His Phe Ala Asp Leu
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Val Gly Ala Ala Gly Ala Gly Ala His Cys Gln Arg Cys Asp Ala Ala
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Asp Pro Gln Arg His His Asn Ala Ser Tyr Leu Thr Asp Phe His Ser
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Gln Asp Glu Ser Thr Trp Trp Gln Ser Pro Ser Met Ala Phe Gly Val
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Gln Tyr Pro Thr Ser Val Asn Ile Thr Leu Arg Leu Gly Lys Ala Tyr
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Glu Ile Thr Tyr Val Arg Leu Lys Phe His Thr Ser Arg Pro Glu Ser
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Phe Ala Ile Tyr Lys Arg Ser Arg Ala Asp Gly Pro Trp Glu Pro Tyr
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Gln Phe Tyr Ser Ala Ser Cys Gln Lys Thr Tyr Gly Arg Pro Glu Gly
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Thr Leu Glu Gly Arg Pro Ser Ala Tyr Asn Phe Glu Glu Ser Pro Gly
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Leu Asn Thr Phe Gly Asp Asp Ile Phe Lys Asp Pro Lys Val Leu Gln
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Ser Tyr Tyr Tyr Ala Val Ser Asp Phe Ser Val Gly Gly Arg Cys Lys
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C	N	C1	260 His	717	60*	<i>G</i> 111	Cvc	265	Pro	7.00	V-1	λla		Gln	Leu
Cys	ASII	275	nis	Ala	361	Gru	280	GLY	110	тэр	vai	285	O. y	U	
Δla	Cvs		Cys	Gln	His	Asn		Thr	Glv	Thr	asp		Glu	Arg	Cvs
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I.eu		Phe	Phe	Gln	Asp		Pro	Tro	Ala	Ara		Thr	Ala	Glu	Ala
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	His	Glu	Cys	Leu		Cvs	Asn	Cvs	Ser		Arg	Ser	Glu	Glu	Cys
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Thr	Phe	Asp	Arg		Leu	Phe	Arg	Ser		Gly	His	Gly	Gly	Arg	Cys
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_				565	_		_	_	570		***			575	0
Leu	Glu	Gly	Thr	GLY	Leu	Ala	Leu		Leu	Arg	HIS	ser	590	Leu	ser
G1	D	c1 -	580 Asp	n1 -	7	21-	C	585	Clar	Glv	λνα	Λla		\$7 ⇒ 1	Dro
GIY	Pro	595	Asp	Ата	AIG	AId	600	GIII	GIY	Gry	nr 9	605	GIII	Val	rio
TAU	Gln.		Thr	Sar	Glu	Aen		Ala	Pro	Pro	Leu		Pro	Phe	His
DCu	610	Giu		501		615		,,,,,			620				
Phe		Ara	Leu	Leu				Thr	Ser	Leu		Leu	Arg	Val	Ser
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	Gly	Pro	Ser	Pro		Gly	Pro	Val	Phe		Thr	Glu	Val	Arg	
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Thr	Ser	Ala	Arg	Pro	Gly	Leu	Ser	Pro	Pro	Ala	Ser	Trp	Val	Glu	Ile
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Cys		Cve	Dro	Thr	Glv	Tvr	Thr	Glv	Gln	Phe	Cys	Glu	Ser	Cvs	Ala
	Ser	Cys	FIU	****	- I	-1-		3			•				
		675					680					685			
		675	Lys				680					685			

											700				
1	690	~	m11	a	3	695	***	~1	m\	~	700	D===		Th-	Cly
	Pro	Cys	Thr	Cys		GIR	ніѕ	GIA	Thr	715	Asp	PIO	ASII	1117	720
705	Cvc	tra 1	Cys	cor	710	uic	The	C1	Clv		Sor	Cve	Glu	Δνα	
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T Au	Dro	Gly	Phe		Glv	Asn	Pro	Dhe		Glv	Gln	Δla	Asn		Cvs
Deu	110	01,	740	- / -	- -,			745		,			750		-1-
Gln	Pro	Cvs	Pro	Cvs	Pro	Glv	Gln		Ala	Cvs	Thr	Thr		Pro	Glu
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Ser	Glv		Val	Val	Cvs	Thr		Cvs	Pro	Pro	Gly		Arq	Gly	Arq
	770				- 4 -	775		_,			780		_	•	J
Arq	Cvs	Glu	Val	Cys	Asp	Asp	Gly	Phe	Phe	Gly	Asp	Pro	Leu	Gly	Leu
785	-			•	790	-	-			795	_				800
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3	C	C	Arg	885	T	Dwa	C1.,	Dho	890 Bho	λαν	Lou	Gln	Dro		λκα
Asp	Cys	ser	900	СУБ	IYI	PIO	GLY	905	PIIC	ASP	neu	GIII	910	GLY	ALG
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CI	CyJ	915	001	-,5	5,5	Cys	920	110		017		925			
Cvs	His		Lys	Thr	Glv	Gln		Thr	Cys	Arq	Pro		Val	Thr	Gly
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Gly	Cys	Arg	Ala	Cys	Arg	Cys	Ser	Pro	Leu	Gly	Ala	Ala	Ser	Ala	Gln
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			980					985				_ •	990		
Lys	Cys		Arg	Cys	His	Tyr			Phe	Leu	Thr			GIY	Thr
•••	.	995	61.	a	D	^	1000		3 3.5	T 0	1701	1005		C1	The
HIS			Gln	Cys	Pro			Tyr	Ald	Leu	1020		GIU	GIU	1111
N1 n	1010		Lys	717	7~~	1015		1 011	Thr	Clu			Len	Gln	Gly
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		Cvs	Gly	Ser			Glv	Pro	Leu			Leu	Leu	Glv	
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Val	Leu	Glu	Ser	Ser	Glu	Glu	Glu	Ile	Leu	His	Ala	Ala	Ala	Ile	Leu

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Glu Ser Val Leu	Ala Thr Val	Arg Gln Val	Gly Ala Asp	Thr Ala Pro
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Tyr Leu Ala Leu	Leu Ala Ser	Pro Gly Ala		Lys Ser Arg
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Ala Glu Asp Leu		Ala Lys Ala		
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Ser Trp Gln His				
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Ala Gln Ala Thr			Leu Thr Met	
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Arg Leu Thr Ala	Thr Phe Ala		1329	
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Met Gly Ala Arg				Lvs Leu Glu
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Phe Pro Arg Pro		Ala Ala Leu		Ala Asp Ser
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Val Ser Asp Arg		Asp Thr Arg	Lys Lys Thr	Lys Gln Ala
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Glu Arg Met Leu	Gly Asn Ala	Ala Pro Leu	Ser Ser Ser	Ala Lys Lys
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Lys Gly Arg Glu	Ala Glu Val	Leu Ala Lys	Asp Ser Ala	Lys Leu Ala
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Lys Ala Leu Leu		Lys Gln Ala		
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Leu Thr Ser Gln				
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Leu Ala Ser Glu			Glu Glu Ala	_
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Gly Ala Gly Leu	ser Giu Met			
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Ser Leu Glu Lys 1490	Asp Tie Giu		1500	nia mry neu
Gly Ser Leu Asp				Aen Glu Thr
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Gln Trp Ala Leu		Ara Leu Gla		
orn tip wie nen	1525	1530		1535
Leu Gln Arg Lys				
1540		1545		1550
Leu Gln Ile Gln			Ala Glu Ile	Arg Ala Asp

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                                25
Cys Met Ser Cys Val Ser Ala Ser Pro Thr Gly His Gln Glu Gly Leu
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                            40
Phe Met Val Ala Pro Pro Met Arg His Leu His Leu Pro Ser His Pro
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                        55
Leu Lys Gln Pro His Leu Cys Arg Phe Arg Arg Phe Leu Leu Arg Leu
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Lys Ser Val Ala Val Asn Lys Gly Arg Leu Lys Arg Leu Gly Ile Thr
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His Ile Leu Asn Ala Ala His Gly Thr Gly Val Tyr Thr Gly Pro Glu
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Phe Tyr Thr Gly Leu Glu Ile Gln Tyr Leu Gly Val Glu Val Asp Asp
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                                    90
Phe Pro Glu Val Asp Ile Ser Gln His Phe Arg Lys Ala Ser Glu Phe
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           100
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Leu Asp Glu Ala Leu Leu Thr Tyr Arg Gly Lys Val Leu Val Ser Ser
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120
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                            40
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Ala Thr Ser Thr Thr Pro Pro Trp Ser Ser Pro Pro Ser Thr Ala Ser
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cccctggacc cctacagcca ggagcagcgg gagcagctgc aggtcctacg ccaggctgcc
180
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Gln Glu Gln Arg Glu Gln Leu Gln Val Leu Arg Gln Ala Ala Phe Glu
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                            40
Val Glu Gly Glu Ser Ser Gly Ala Gly Leu Ser Ala Asp Arg Arg
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Ser Leu Cys Ala Arg Glu Phe Arg Lys Leu Gly Phe Ser Asn Ser Asn
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Phe Leu Phe Val Glu Arg Ala Val Arg Leu Thr Gln Gln Leu Leu Glu
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40
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Cys Leu Gly His Leu Arg Ala Trp Lys Val His Ala Leu Thr Arg Val
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Met Thr Thr Ile Ser Pro Lys Leu Ser Ser Cys His Pro Ile Gly Ser
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120
acatgggttt catgggtcga catgggttcc gtgtcctgct tgccgggcct gagctgtttg
180
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cggggcggga cacgagctgt tggaggagaa agccatcagt gtatttagag gcaaagggct
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1169

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540
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_	_	_	420	m)		~ 3		425		G1-		C	430	O	C
Tyr	Leu	_	GIU	Thr	Leu	Glu		Ser	Lys	GIN	vaı	445	PFO	cys	ser
mL	3	435	C1-	T 011	C1-	N a m	440	<i>c</i> 1	т1 о	λ ~ ~	A 1 -		T 011	Λen	Luc
Int	450	ьуѕ	GIII	ren	GIII	Asp 455	GIII	GIU	116	Arg	460	Gru	neu	ASII	пуз
uie		Glv	His	Pro	Ser	Gln	Δla	Val	Dhe	Asn		Glu	Δla	Asp	Lvs
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His	Ile		Thr	Leu	Asp	GIA		Ser	Tyr	Thr	Phe		GIA	Leu	GIA
_		435	_				440		~1			445	DL -	•	.
Asp		Leu	Leu	vaı	GIY		GIn	Asp	GIY	Asn		ser	Pne	ren	Leu
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G1	m	v	*	485	D	***	R	. 1 -	490	λ ~~~	17.0 7	T 011	T 011		Acn
GIN	ırp	reu	Leu	GIU	Pro	n15	ASP	505	TTE	Arg	val	neu	510	waħ	Wall
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Th~	Dha	515	717	Th ~	C1 ··	V-1	520	Lou	Co~	Ara	λεν		Ser	G) ii	Val
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Ser Gly Glu Asp Val Arg Asp Val Thr Ala Leu Asn Val Ser Thr Leu
1025
                   1030
                                        1035
Lys Ala Tyr Phe Arg Cys Asp Gly Tyr Lys Gly Tyr Asp Leu Val Tyr
                1045
                                    1050
                                                        1055
Ser Pro Gln Ser Gly Phe Thr Cys Val Ser Pro Cys Ser Arg Gly Tyr
            1060
                                1065
                                                    1070
Cys Asp His Gly Gly Gln Cys Gln His Leu Pro Ser Gly Pro Arg Cys
                           1080
        1075
                                                1085
Ser Cys Val Ser Phe Ser Ile Tyr Thr Ala Trp Gly Glu His Cys Glu
                       1095
                                            1100
His Leu Ser Met Lys Leu Asp Ala Phe Phe Gly Ile Phe Phe Gly Ala
                   1110
                                       1115
Leu Gly Gly Leu Leu Leu Gly Val Gly Thr Phe Val Val Leu Arg
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Phe Trp Gly Cys Ser Gly Ala Arg Phe Ser Tyr Phe Leu Asn Ser Ala
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                                1145
Glu Ala Leu Pro
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ctggcgccgc gcaaggtgct cggtaaaagc aagcagaagg ccgaggagct ggcggtccgg
caactgaccc acgtgggcct gagcgacaag ctcaagacct ttcccgcana gctttccggc
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cgcatgctcg ccgaagacgg catgaccatg gtcctggtga cccatgaaat ccgctttgcc
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С
481
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<213> Homo sapiens
<400> 1392
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Arg Gln Lys Ile Gly Ile Val Phe Gln Gln Trp Asn Ala Phe Pro His
                                          30
                   25
          20
Leu Thr Val Leu Glu Asn Val Met Leu Ala Pro Arg Lys Val Leu Gly
                                             45
       35
                          40
Lys Ser Lys Gln Lys Ala Glu Glu Leu Ala Val Arg Gln Leu Thr His
                                       60
                 55
Val Gly Leu Ser Asp Lys Leu Lys Thr Phe Pro Ala Xaa Leu Ser Gly
                  70
                                     75
Gly Gln Gln Arg Met Ala Ile Ala Arg Ala Leu Ala Met Ser Pro
              85
                                  90
Asp Tyr Met Leu Phe Asp Glu Ala Thr Ser Ala Leu Asp Pro Gln Leu
                             105
          100
Val Gly Glu Val Leu Asp Thr Met Arg Met Leu Ala Glu Asp Gly Met
                          120
                                             125
Thr Met Val Leu Val Thr His Glu Ile Arg Phe Ala Arg Asp Val Ser
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Asp Arg Val Ala Phe Phe Arg Asn Gly Leu Val His Glu Ile Gly Ala
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Leu Ala Gly Tyr Tyr Glu Pro Asp Glu His Gly His Arg Lys Pro Glu
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                                                 30
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Ser Leu Tyr Gly Ala Val Lys Met Trp Ala Leu Leu Arg Arg Gln Gly
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                          40
                                             45
Ile Arg Trp Pro Ala Ala Xaa Val Glu Arg Leu Met Arg Asp Asn Arg
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                      55
Trp Arg Gly Val Thr Arg Arg Lys Lys Val Xaa His His His Arg
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75

70

65

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ccagattett aaaggeggte gegatgttge eegggegaca agggeettgg etggaegggt
gtcggtgggg gagatcccct cagttgcact agagcacgtg gccgatgacg tggaggtatt
240
ggeteagget aggegggete atgeagtggg eggaagegtt teegaegeee teattgeeae
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347
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<211> 95
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<213> Homo sapiens
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Arg Arg Arg Ala Gln Ile Leu Lys Gly Gly Arg Asp Val Ala Arg Ala
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                                25
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Thr Arg Ala Leu Ala Gly Arg Val Ser Val Gly Glu Ile Pro Ser Val
        35
Ala Leu Glu His Val Ala Asp Asp Val Glu Val Leu Ala Gln Ala Arg
                        55
                                            60
   50
Arg Ala His Ala Val Gly Gly Ser Val Ser Asp Ala Leu Ile Ala Thr
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Ser Arg Gln Pro Gly Met Ala Gly Leu Val Pro Leu Ala His Ala
                                    90
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etggeegeg tegegattge egecactate catteteegg aaegegegea agacatggte
120
aaccgcttga gcaaacgcga agaaggcttc acgcaatggg tacgtgccgc acaggacgat
ggtcgactgt cctgcagcga cccggcgttc gctgcccacc agatacaaag cctgctcaag
240
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gcgttcgcct tttggccgca aatcaccctg ggccagccgg tgctggatgc cgccagccag
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308
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<211> 93
<212> PRT
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Met Gln Met Met Ser Asp Thr Asn Phe Leu Asp Leu Ala Arg Val Ala
                                   10
Ile Ala Ala Thr Ile His Ser Pro Glu Arg Ala Gln Asp Met Val Asn
                                25
                                                    30
Arg Leu Ser Lys Arg Glu Glu Gly Phe Thr Gln Trp Val Arg Ala Ala
                                                45
        35
                            40
Gln Asp Asp Gly Arg Leu Ser Cys Ser Asp Pro Ala Phe Ala Ala His
    50
                        55
Gln Ile Gln Ser Leu Leu Lys Ala Phe Ala Phe Trp Pro Gln Ile Thr
                    70
                                        75
Leu Gly Gln Pro Val Leu Asp Ala Ala Ser Gln Ala Asn
                85
                                    90
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<211> 539
<212> DNA
<213> Homo sapiens
<400> 1399
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aatgaactga agtctagatt tttgagatgt agtcctttac tgattataaa gcaaatgcct
ttagatattt taacttcatc agtactatct gtagtaggag gctgatttta ctaaaattag
ataattatat acatetgtte etatteettt ggtaggaeet ttaagaaagt catgetgaat
ctgagaatgc caggacattt cacgtggtat gaatgtagga tattcattta cacatcgctg
cacagacage etetatataa eccaecetgt tggggtattg aattttteet ttteeegeee
tacttttaaa tottgtcatg taatttcaac acataatttg tggcacttta gttttttac
cctttatagt ttaataactt atacatgtac atgcttaaaa tgtcaaacaa tacaaatggg
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aacaaagaaa attgcttcac catctgtgaa cccctccttt tgtagtcccc ttcacgcgt
539
<210> 1400
<211> 90
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<400> 1400

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Met Asn Val Gly Tyr Ser Phe Thr His Arg Cys Thr Asp Ser Leu Tyr
Ile Thr His Pro Val Gly Val Leu Asn Phe Phe Ser Arg Pro Thr
                                25
                                                    30
            20
Phe Lys Ser Cys His Val Ile Ser Thr His Asn Leu Trp His Phe Ser
                            40
                                                45
Phe Phe Thr Leu Tyr Ser Leu Ile Thr Tyr Thr Cys Thr Cys Leu Lys
                        55
                                            60
Cys Gln Thr Ile Gln Met Gly Thr Lys Lys Ile Ala Ser Pro Ser Val
Asn Pro Ser Phe Cys Ser Pro Leu His Ala
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neattggggt ttgatggccg cgtttccctg ctgctgggcg cgatcctcat cgtcaccggc
ccaacggtga ttaacccgat cctgcgtcag ttgcgtccta cccggcgagt gagtgctctg
240
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caggccataa ccagcatcga ccgatcttcc atcggacaag gcgtcttgaa tctggggctc
360
accetattgg tegggetget ettegetgge eccategggt ggategteac egegatgatg
aaacggcacc tcatcccgga cttcctacaa ggcgtgattt tcgttggggt cgccgttgga
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653
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Phe Glu Gly Ser Leu Gly Leu Lys Leu Arg Glu Val Arg Asp Leu Gly
1
                 5
                                    10
Arg Pro Ile Phe Arg Leu Cys Thr Val Thr Ala Arg Leu Ala Trp Val
            20
                                25
Xaa Ser Ser Pro Ala Arg Arg Trp Xaa Leu Gly Phe Asp Gly Arg Val
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```
40
                                               45
       35
Ser Leu Leu Gly Ala Ile Leu Ile Val Thr Gly Pro Thr Val Ile
                                       60
                    55
Asn Pro Ile Leu Arg Gln Leu Arg Pro Thr Arg Arg Val Ser Ala Leu
                                       75
                   70
Leu Arg Trp Glu Gly Ile Val Val Asp Pro Leu Gly Ala Ile Leu Ala
              85
                                  90
Leu Leu Val Tyr Gln Ala Ile Thr Ser Ile Asp Arg Ser Ser Ile Gly
                                                  110
                              105
           100
Gln Gly Val Leu Asn Leu Gly Leu Thr Leu Leu Val Gly Leu Leu Phe
                          120
                                              125
Ala Gly Pro Ile Gly Trp Ile Val Thr Ala Met Met Lys Arg His Leu
                                           140
                      135
  130
Ile Pro Asp Phe Leu Gln Gly Val Ile Phe Val Gly Val Ala Val Gly
                                     155
                  150
Thr Cys Val Gly Ala Asn Val Ile Arg Glu Glu Ser Gly Leu Val Ala
               165
                                 170
Val Thr Met Leu Gly Ile Tyr Leu Ala Asn Gln Arg Asn Leu Glu Leu
                             185
                                              190
Glu Pro Val Ile Glu Phe Lys Glu His Leu Gln Val Leu Leu Val Gly
                          200
      195
Val Leu Phe Ile Met Leu Ala Gly Arg
<210> 1403
<211> 393
<212> DNA
<213> Homo sapiens
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tgttccttgg ggtcatgatc tccacaagtt gggcatatct cctttatcag ctgcttgcca
180
gagetteett ceatetett cattatgace teaaagggag atggeaeget agtettggae
gtcctagctt gtttccgaag ggctgtcaga gcctccctgt taccatttct tatcttatca
ttttccacca actgatgtct agccagaaga actttttctg catcagtctc aatatcaacc
agageetett gaagetgett catgttggga tee
393
<210> 1404
<211> 127
<212> PRT
<213> Homo sapiens
<400> 1404
Met Lys Gln Leu Gln Glu Ala Leu Val Asp Ile Glu Thr Asp Ala Glu
1
               5
                                 10
Lys Val Leu Leu Ala Arg His Gln Leu Val Glu Asn Asp Lys Ile Arg
```

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25
           20
Asn Gly Asn Arg Glu Ala Leu Thr Ala Leu Arg Lys Gln Ala Arg Thr
                           40
Ser Lys Thr Ser Val Pro Ser Pro Phe Glu Val Ile Met Lys Glu Met
                      5.5
                                          60
Glu Gly Ser Ser Gly Lys Gln Leu Ile Lys Glu Ile Cys Pro Thr Cys
                   70
                                       75
Gly Asp His Asp Pro Lys Glu His Thr Trp Leu Met Phe Pro Gly Ser
                                 90
               85
Asp Met Phe Ala Arg Val Pro Phe His Val Ala His Thr Val Val Glu
                             105
           100
Lys Asp Gln Glu Arg Leu Asp Leu Asp Thr Lys Lys Leu Gln Ser
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<211> 421
<212> DNA
<213> Homo sapiens
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120
gaagagtteg eegeegagea aaacetgegt geegeeetgg gegagttgea tateeaggte
gtcaacgtca gcggtggcca gcagatcctc gaactcagcg gcccgaacgt gcgcgacgtg
ctgatgaaat ccaccagcta cgacgtacac cccaacaact tcccggtggg caaggcggtg
ggcacggtgt tcgccaagtc gcaactggtg atccgccata ccgccgaaga cacctgggaa
ctgctgatcc gtcgcagctt ctcggattac tggtggctgt ggttgcagga cgcggctgca
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421
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<212> PRT
<213> Homo sapiens
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Xaa Arg Leu His Lys Ala Leu Gly Ile Glu Leu Pro Gly Ala Leu Gln
Val Ile Val Lys Gly Glu Thr Ser Leu Gln Trp Leu Gly Pro Asp Glu
           20
                               25
Trp Leu Leu Ile Val Pro Ser Gly Glu Glu Phe Ala Ala Glu Gln Asn
                                               45
Leu Arg Ala Ala Leu Gly Glu Leu His Ile Gln Val Val Asn Val Ser
                       55
                                         60
Gly Gly Gln Gln Ile Leu Glu Leu Ser Gly Pro Asn Val Arg Asp Val
                   70
                                       75
Leu Met Lys Ser Thr Ser Tyr Asp Val His Pro Asn Asn Phe Pro Val
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90
                                                         95
Gly Lys Ala Val Gly Thr Val Phe Ala Lys Ser Gln Leu Val Ile Arg
                                                    110
            100
                                105
His Thr Ala Glu Asp Thr Trp Glu Leu Leu Ile Arg Arg Ser Phe Ser
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                            120
Asp Tyr Trp Trp Leu Trp Leu Gln Asp Ala Ala Ala
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                        135
                                            140
<210> 1407
<211> 1006
<212> DNA
<213> Homo sapiens
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ctggaggegg ccagcaagtt ccagttecac acettetgea aagtetgegt gteetttett
gagaagcagc tgacggccag caactgcctg ggcgttgctg ccatggccga ggccatgcag
240
tgcagcgagc tctaccacat ngccaaggcc ttcgcgctgc agatcttccc cgaggtggcc
300
geccaggagg agateeteag catetecaag gacgaettea tegeetaegt etecaacgae
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420
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660
ttgqttqggg gccgtcagat ggtggggatg acccagcgct cgctggtggc cgtcacctgc
720
tggaacccgc agaacaacaa gtggtacccc ttggcctcgg tgcccttttt aggcccggga
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gtgccgctgg ctgatgtctg gtgctacatg tccctgcttg ataactggaa cctcgtctcc
agaatgccag teeceegetg teggeeceat ageetegtet aegatgggaa gatttacace
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1006
<210> 1408
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<212> PRT
<213> Homo sapiens
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Xaa Gly Arg Glu Lys Leu Glu Leu Val Leu Ser Asn Leu Gln Ala Asp
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            5
Val Leu Glu Leu Leu Glu Phe Val Tyr Thr Gly Ser Leu Val Ile
                             25
Asp Ser Ala Asn Ala Lys Thr Leu Leu Glu Ala Ala Ser Lys Phe Gln
            40
Phe His Thr Phe Cys Lys Val Cys Val Ser Phe Leu Glu Lys Gln Leu
                  55
Thr Ala Ser Asn Cys Leu Gly Val Ala Ala Met Ala Glu Ala Met Gln
                 70
                                    75
Cys Ser Glu Leu Tyr His Xaa Ala Lys Ala Phe Ala Leu Gln Ile Phe
                                90
             85
Pro Glu Val Ala Ala Gln Glu Glu Ile Leu Ser Ile Ser Lys Asp Asp
                            105
Phe Ile Ala Tyr Val Ser Asn Asp Ser Leu Asn Thr Lys Ala Glu Glu
                                         125
                       120
Leu Val Tyr Glu Thr Val Ile Lys Trp Ile Lys Lys Asp Pro Ala Thr
            135
                            140
Arg Thr Gln Tyr Ala Ala Glu Leu Leu Ala Val Val Arg Leu Pro Phe
       150
                                   155
Ile His Pro Ser Tyr Leu Leu Asn Val Val Asp Asn Glu Glu Leu Ile
                      170
Lys Ser Ser Glu Ala Cys Arg Asp Leu Val Asn Glu Ala Lys Arg Tyr
                            185
His Met Leu Pro His Ala Arg Gln Glu Met Gln Thr Pro Arg Thr Arg
                         200
                                           205
Pro Arg Leu Ser Ala Gly Val Ala Glu Val Ile Val Leu Val Gly Gly
                     215
Arg Gln Met Val Gly Met Thr Gln Arg Ser Leu Val Ala Val Thr Cys
                 230
                                  235
Trp Asn Pro Gln Asn Asn Lys Trp Tyr Pro Leu Ala Ser Val Pro Phe
                                250
             245
Leu Gly Pro Gly Phe Phe Ser Val Val Ser Ala Gly Ala Asn Ile Tyr
                  265
                                            270
         260
Leu Ser Gly Gly Met Glu Ser Gly Val Pro Leu Ala Asp Val Trp Cys
                         280
                                            285
Tyr Met Ser Leu Leu Asp Asn Trp Asn Leu Val Ser Arg Met Pro Val
                                       300
                    295
Pro Arg Cys Arg Pro His Ser Leu Val Tyr Asp Gly Lys Ile Tyr Thr
                 310
                                   315
Leu Gly Gly Leu Gly Val Ala Gly Asn Val Asp His Val Glu Arg
<210> 1409
<211> 279
<212> DNA
<213> Homo sapiens
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gcacgagata gcaccatgca actgatcgat atcggcgtca acctgaccaa cagcagtttc

120

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cacgaccaac aggccgcaat cgtcgagcgc gcgctggagg ccggcgttac gcaaatgctg
ctgacaggca ccagcctggc ggtcagcgaa caagccctgg aactgtgcca tcaactggat
gcaageggeg cecacetgtt egceaeggee ggegtgeae
279
<210> 1410
<211> 93
<212> PRT
<213> Homo sapiens
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Gly Arg Pro Ala Ala Arg Asp Ser Thr Met Gln Leu Ile Asp Ile Gly
           20
                                25
Val Asn Leu Thr Asn Ser Ser Phe His Asp Gln Gln Ala Ala Ile Val
       35
                            40
Glu Arg Ala Leu Glu Ala Gly Val Thr Gln Met Leu Leu Thr Gly Thr
                                            60
   50
                        55
Ser Leu Ala Val Ser Glu Gln Ala Leu Glu Leu Cys His Gln Leu Asp
                                        75
65
Ala Ser Gly Ala His Leu Phe Ala Thr Ala Gly Val His
                85
                                    90
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<211> 321
<212> DNA
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120
gattttcaat ctattctta ctattccgcg ccaaaaagca tgaaggataa gcctaagtcg
ttagacgaag tcgatcctga attgttacgt acttatgaaa aactgggcat tcctctcata
qaacaqcaaa tgcttgctgg tatcgccgta gatgctgtct ttgactcagt gtctgtcgtt
actacttttc gtcaaaagct t
321
<210> 1412
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<212> PRT
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Xaa Arg Ile Ser Gly Met Lys Asn Glu Pro Glu Trp Met Leu Glu Trp
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1
                5
                                   10
Arg Leu Ser Ala Phe Arg Glu Trp Leu Glu Met Glu Glu Pro Ser Trp
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```
20
                               25
Ala His Val Asp Tyr Pro Lys Ile Asp Phe Gln Ser Ile Ser Tyr Tyr
                           40
                                               45
Ser Ala Pro Lys Ser Met Lys Asp Lys Pro Lys Ser Leu Asp Glu Val
                     55
                                           60
Asp Pro Glu Leu Leu Arg Thr Tyr Glu Lys Leu Gly Ile Pro Leu Ile
65
                   70
                                       75
Glu Gln Gln Met Leu Ala Gly Ile Ala Val Asp Ala Val Phe Asp Ser
                                   90
               85
Val Ser Val Val Thr Thr Phe Arg Gln Lys Leu
           100
<210> 1413
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<212> DNA
<213> Homo sapiens
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ggcgaaatcg gcctcgacct gatcatcgac ctgccacgtc cgcgtgcccg tggttcacac
120
cgcctggccg cgttggaagc cgaagtgata aaccgtgtgc tgtcataacc cngcacgaag
180
ccggaacccg aacatgttaa accgctgcct acgaaattgc gttgggctca ataactcata
gaggaacacc atcatgacta taaaagccat caacgtgcgt aaccagttaa aaggcaccat
caaqqaaatc gtagtcggca acgtgctctc ggaaatcgac gtgcagaccg cctccgggat
cgtcacttct gtgatcacta cgcgt
385
<210> 1414
<211> 55
<212> PRT
<213> Homo sapiens
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Met Thr His Asp Val Ser Glu Ala Val Ala Ile Ala Asp Arg Val Ile
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Leu Ile Glu Asp Gly Glu Ile Gly Leu Asp Leu Ile Ile Asp Leu Pro
                                                   30
           20
                               25
Arg Pro Arg Ala Arg Gly Ser His Arg Leu Ala Ala Leu Glu Ala Glu
      35
                           40
Val Ile Asn Arg Val Leu Ser
   50
                       55
<210> 1415
<211> 420
<212> DNA
<213> Homo sapiens
<400> 1415
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gtaactgtcc ttgtcatctg tcttgcagat ttagaagagg aatcagaaag ctgggacaac
120
tctgaggctg aagaggagga gaaagcccct gtgttgccag agagtacaga agggcgggag
180
ctgacccagg gcccggcaga gtcctcctct ctctcaggct gtgggagctg gcagcccgg
240
aagetgecag tetteaagte ceteeggeae atgaggeagg teetgggtge ceettettte
cqcatqctgg cctggcacgt tctcatgggg aaccaggtga tctggaaaag cagagacgtg
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420
<210> 1416
<211> 123
<212> PRT
<213> Homo sapiens
<400> 1416
Met Arq Leu Phe Val Pro Val Thr Val Leu Val Ile Cys Leu Ala Asp
1
                5
Leu Glu Glu Glu Ser Glu Ser Trp Asp Asn Ser Glu Ala Glu Glu
                                25
                                                    30
           20
Glu Lys Ala Pro Val Leu Pro Glu Ser Thr Glu Gly Arg Glu Leu Thr
                            40
                                                45
Gln Gly Pro Ala Glu Ser Ser Ser Leu Ser Gly Cys Gly Ser Trp Gln
                                            60
                        55
Pro Arg Lys Leu Pro Val Phe Lys Ser Leu Arg His Met Arg Gln Val
                   70
Leu Gly Ala Pro Ser Phe Arg Met Leu Ala Trp His Val Leu Met Gly
               85
                                   90
Asn Gln Val Ile Trp Lys Ser Arg Asp Val Asp Leu Val Gln Ser Ala
           100
                                105
Phe Glu Val Leu Arg Val Arg Thr Ser Phe Pro
       115
                            120
<210> 1417
<211> 5058
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Gly His Ala Thr Ser Leu Pro Val Thr Asp Thr Ser Ser Ala Ser Thr
        1380 1385 1390
Gly Asp Thr Thr Ser Leu Pro Val Thr Asp Thr Ser Ser Ala Ser Thr
     1395 1400 1405
Gly His Ala Thr Pro Leu Pro Val Thr Asp Thr Ser Ser Ala Ser Thr
         1415 1420
Gly His Ala Thr Pro Leu Leu Val Thr Asp Thr Ser Ser Ala Ser Thr
     1430
                              1435
1425
Gly His Thr Thr Pro Leu His Val Thr Ser Pro Ser Ser Ala Ser Thr
           1445 1450
Gly His Ala Thr Pro Leu Pro Val Thr Ser Pro Ser Ser Ala Ser Thr
         1460 1465
                               1470
Ser His Ala Thr Ser Leu Pro Val Thr Asp Thr Ser Ser Ala Ser Thr
     1475 1480 1485
Gly His Ala Thr Pro Leu Leu Val Thr Asp Thr Ser Ser Ala Ser Thr
          1495 1500
  1490
Gly His Ala Thr Pro Leu Leu Val Thr Asp Thr Ser Ser Ala Ser Thr
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180
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309
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Lys Phe Ile Gln Asp Ser Gly Leu Asp Tyr Ile Ile Ile Arg Leu Cys
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Gly Phe Met Gln Gly Leu Ile Gly Gln Tyr Ala Val Pro Ile Leu Glu
Glu Lys Ser Val Trp Gly Thr Asp Ala Pro Thr Arg Ile Ala Tyr Met
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Lys Ala Asn Lys Lys Leu Met
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Pro Glu Glu Gly Arg Met Leu Glu Gln Ser Arg Ala Gln Leu Leu Ala
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Asn Ala Ser Val Met Pro Met Ser Ser Gln Asp Phe Ser Ser Ala Leu
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Leu Leu Asp Cys Cys Arg Thr Gln His Gln Leu Gln Cys Pro Gln Ser
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                                       75
Pro Asp Phe Ser Gln Thr Asp Ser Ser Lys Pro Pro Leu Trp Ala Gly
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Tyr Thr Ser Gln Ser Arg Leu Val Thr Ser Leu Leu Ser Pro Pro Gly
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His Gly Gln Thr Phe Leu Thr Tyr Phe Thr Thr Leu Gln
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tgtgtcaccc tgattgatct ggagcttcac aatcctaaag caatagcagt agatccaata
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gatgggatga accgaacaag gataattgat tcaaagacag agcagccagc tgcactggca
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           20
                               25
Val Cys Asn Ser Asn Gly Ser Val Cys Val Thr Leu Ile Asp Leu Glu
Leu His Asn Pro Lys Ala Ile Ala Val Asp Pro Ile Ala Gly Lys Leu
                       55
                                           60
Phe Phe Thr Asp Tyr Gly Asn Val Ala Lys Val Glu Arg Cys Asp Met
Asp Gly Met Asn Arg Thr Arg Ile Ile Asp Ser Lys Thr Glu Gln Pro
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1206

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Val Ile Ala Gly Glu Asp Gly Val Asp Ala Gly Val Ile Pro Met Pro
                            40
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Leu Arg Arg Met Gln Thr Gln Thr Leu Lys Gly Leu Arg Val Ala Trp
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Tyr Ser Asp Gly Gly Ile Glu Pro Val Asp Ala Leu Thr His Thr Thr
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                                        75
Leu Gln Ala Val Ala Asp Leu Leu Asp Ala Glu Gly Ala Leu Ile Arg
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Pro Ala Phe Pro Ser Ala Leu Ser Asn Ala Arg Asp Ile Thr Glu Arg
                                                    110
                               105
Tyr Trp Ala Met Ser Gln Ser Ser Gly Ala Gln Ser Ile Gln Leu Phe
                            120
       115
Ser Asp Trp Asp Gln Phe Arg Thr Ala Met Leu Gly Phe Met Ala Asp
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                                            140
    130
Tyr Asp Ile Ile Leu Cys Pro Val Asp Ala Ala Pro Ala Thr Gln Leu
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150
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Gly Glu Thr Arg Pro Gly Leu Phe Ser Ser Pro Leu Pro Asn Gly Leu
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Ala Gly Trp Pro Cys Val Val Val Arg Ala Gly Thr Asp Ser Ala Gly
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                               185
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           20
Thr Pro Met Arg Leu Ala Ser Glu Leu Met Gln Val His Pro Ser Gly
                                               45
                           40
      35
Ala Val Arg Phe Arg His Cys Ser Val Pro Gln Asn Lys Leu Asn Ser
                       55
                                          60
Gln Lys Ile Leu Pro Val Glu Lys Ala Gln Gly Lys Ile Leu Phe Ile
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Ala Gly Glu Asn Asp Glu Ser Leu Ala Ser
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240
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Leu Pro Leu Ile Ala Ser Asp Met Gly Val Ala Val Ser Thr Val Asn
                                                 45
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                            40
Leu Val Ala Gly Ala Ala Leu Leu Gly Phe Ala Thr Gly Leu Ala Phe
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Leu Leu Pro Met Gly Asp Arg Phe Asp Arg Arg Lys Leu Val Leu Gly
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414
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                               25
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Thr Ala Gly Leu Pro Val Gly Arg Gly Ala Arg Gly Met Gln Pro Thr
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                            40
Ala Leu Pro Arg Gln Ala Glu Gly Val Lys His Ala Ser Pro Ser Cys
Leu Arg Gly Ser Cys Gln His Leu Pro Gln Ala Glu Pro Thr Trp Ser
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                  70
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<212> DNA
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Asp Ala Asp Val Asp Ala Ala Val Ser Asn Ala Val Ala Cys Lys Phe
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Arg Cys Gly Gly Gln Thr Cys Ile Ser Ala Asn Arg Ile Tyr Val His
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Glu Gln Val His Asp Glu Phe Val Ser Lys Phe Gly Glu Arg Val Lys
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. 50
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Lys Leu Arg Val Gly Tyr Gly Leu Asp Glu Asn Ile Asn Ile Gly Pro
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75

70

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Leu Val Asn Glu Ala Ser Gln Asp Lys Ala Glu Ser His Val Arg Ala
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1260
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Glu Tyr Tyr Asp Gly Asp Met Phe Arg Met Asp Asn Cys Arg Phe Cys
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Ile Asn Cys Glu Arg Tyr Tyr Val Pro Glu Gly Glu Cys Cys Pro Val
                                    90
                85
Cys Glu Ile Gln Cys Ile Leu Leu Ile Ile Pro Leu Ala Ala Asn
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Gly Leu Ile Leu Ala His Gly Asp Arg Trp Arg Glu Asp Asp Cys Thr
       115
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                                                125
Phe Cys Gln Cys Val Asn Gly Glu Arg His Cys Val Ala Thr Val Cys
   130
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                                            140
Gly Gln Thr Cys Thr Asn Pro Val Lys Val Pro Gly Glu Cys Cys Pro
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Val Cys Glu Glu Pro Thr Ile Ile Thr Val Asp Pro Pro Ala Cys Gly
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Glu Leu Ser Asn Cys Thr Leu Thr Gly Lys Asp Cys Ile Asn Gly Phe
                                185
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Lys Arg Asp His Asn Gly Cys Arg Thr Cys Gln Cys Ile Asn Thr Glu
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Glu Leu Cys Ser Glu Arg Lys Gln Gly Cys Thr Leu Asn Cys Pro Phe
                        215
Gly Phe Leu Thr Asp Ala Gln Asn Cys Glu Ile Cys Glu Cys Arg Pro
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Arg Pro Lys Lys Cys Arg Pro Ile Ile Cys Asp Lys Tyr Cys Pro Leu
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Cys Pro Glu Leu Ser Cys Ser Lys Xaa Leu Pro Leu Gly Phe Pro Ala
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Gly Gln Ser Arg Leu Ser Tyr Leu Gln Val Gln Arg Gly Leu Cys Phe
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Ser Trp Ala Thr His Pro Val Gly His Leu Ser His Arg Gly Trp Ser
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Ser Ser
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372
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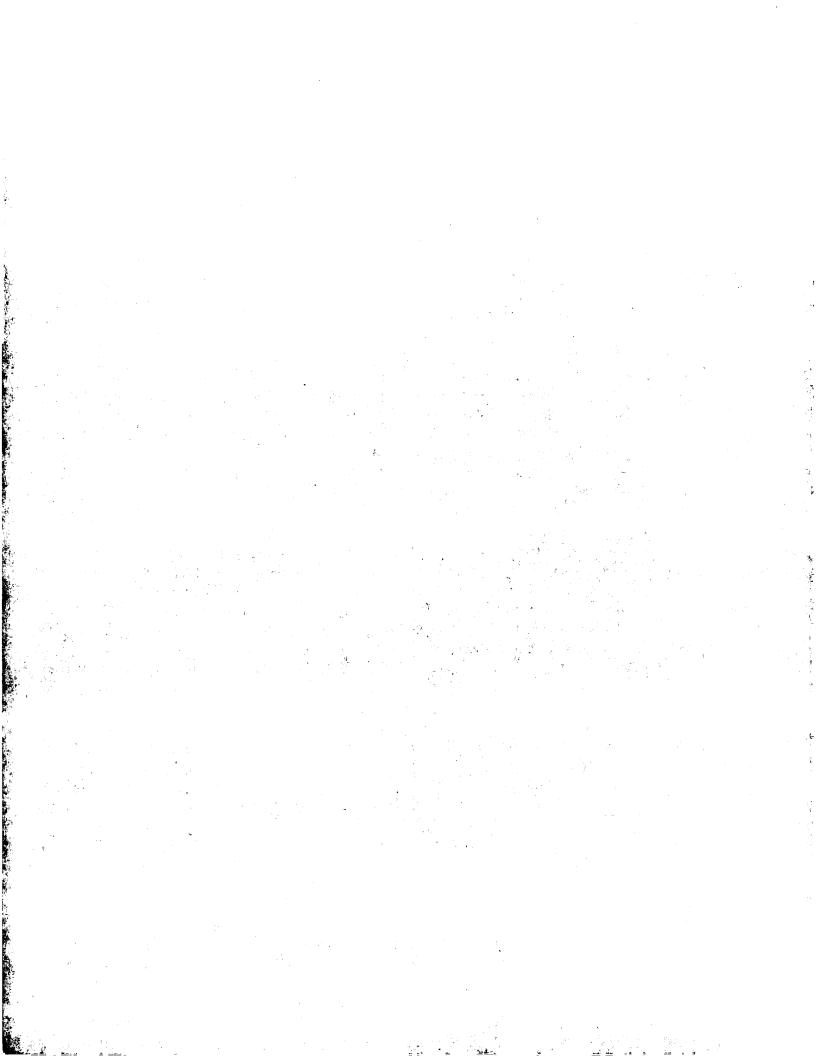
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Thr Trp Arg Pro Arg Gly Ser Ala Ile Ser Cys Val Gln Trp Val Asn
        35
Lys Thr Thr Gly Asn Phe Arg Val Gln Ala Val Leu Ile Phe Gly Arg
                                            60
                        55
Phe Cys Ile Cys Thr Phe Thr His Ser Leu Lys Cys Ile Cys Asn Pro
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Lys Ile Asn Thr Ala Val Ser Gln Ser Phe Ser Asp Thr Gly Arg Gly
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                85
Val Lys Ile Leu Ser
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240
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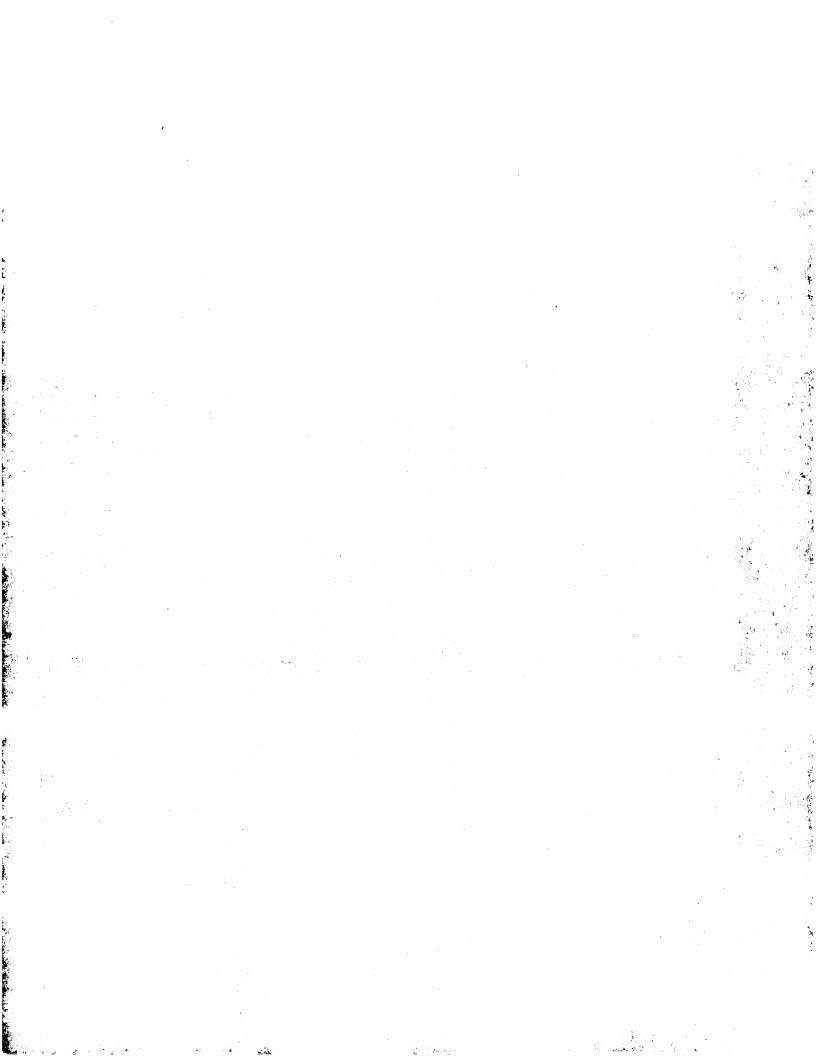
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Ser His Arg Thr Glu Ser Ser His Ser Pro His Arg Ser His Ser His
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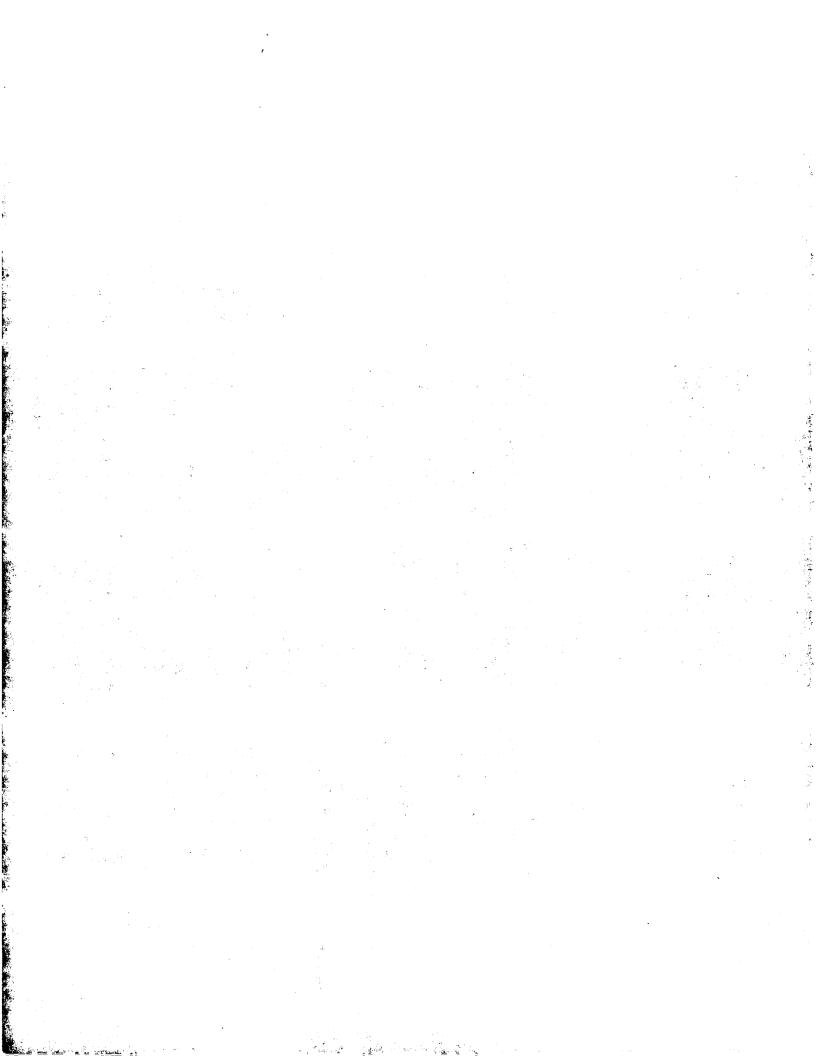
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actecetace gggagaeggt etecaagegg accaetaett ggttettteg ageeggetea
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gaggtttatg agetggeent ecceegagga gtegtgtteg ceatgeaaag egeetegttg
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Asp Ala Phe Ile Ser Gly Lys Gln Thr Pro Tyr Arg Glu Thr Val Ser
                                                45
                            40
Lys Arg Thr Thr Trp Phe Phe Arg Ala Gly Ser Glu Val Tyr Glu
                       55
                                            60
Leu Ala Xaa Pro Arg Gly Val Val Phe Ala Met Gln Ser Ala Ser Leu
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Arg Val Asp Pro Asp Asn Thr Val Asp Lys Leu Pro Thr Leu Gly Glu
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Arg Leu
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qacctgctga tcggcaacga tgcggccaac gaactgcgcg gcggtgccgg caacgatatc
ctctacgggg ctggcggtgc cgaccaggtt tgggttggtt cgggcaacaa taccttcgtg
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ttcgccgccg tttccgactc ggcgccgaaa gcggccgacc ggatcatgga cttcaccagt
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gcg
363
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Asn Ala Val Gly Gly Ser Gly Asn Asp Leu Leu Ile Gly Asn Asp Ala
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                                                45
Ala Asn Glu Leu Arg Gly Gly Ala Gly Asn Asp Ile Leu Tyr Gly Ala
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Gly Gly Ala Asp Gln Val Trp Val Gly Ser Gly Asn Asn Thr Phe Val
                    70
Phe Ala Ala Val Ser Asp Ser Ala Pro Lys Ala Ala Asp Arg Ile Met
                                    90
                85
Asp Phe Thr Ser Gly Gln Asp Lys Ile Asp Leu Ser Gly Ile Thr His
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Gly Ser Gly Leu Thr Phe Val Asn Ala
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                            120
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<212> DNA
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ggaatgtacg tgtcaggagg agggagggtg cctacaaccc tttggtactg gcgtttgtga
ttgaggcaac cgtcgtcatc gatggtgtca tccaacctgt ggtgtttaac gcacacctgg
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240







<i>a</i> .								¢	

				1988年の1987年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年の1988年					

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Glu Leu Gly Trp Asn Pro Thr Arg Thr Asp Leu Arg Arg Ile Val Glu
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Asp Ala Trp Ala Phe Thr Ala Gly Gly Ala Glu Arg
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<212> DNA
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240
tttgaaccag gcacgacaac ggtttcgctc aatactttgt tttcaaaggt aaagacgtgg
ttacctacgt taattgaaaa agcgttagaa aagcagcaat cagaatctat cattatgcca
traggeacct tttccacggc gaatcaaaaa gcccttggat tagaaataat gaaattgtta
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aaattcgact tt
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Pro Glu Lys Leu Val Glu Ala Gln Ser Ile Ala Gly Ser Lys Cys Glu
           20
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His Ala Trp Arg Leu Gln Arg Ser Glu Asn Asp Trp Val Gly Phe Glu
       35
                           40
                                                45
Lys Asn Trp Lys Glu Val Val Ala Leu Ser Arg Glu Glu Ala Gln Ile
                        55
Arg Gly Glu Ala Leu Asn Leu Thr Pro Tyr Asp Ala Met Leu Asp Lys
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75
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65
Phe Glu Pro Gly Thr Thr Thr Val Ser Leu Asn Thr Leu Phe Ser Lys
                85
                                   90
Val Lys Thr Trp Leu Pro Thr Leu Ile Glu Lys Ala Leu Glu Lys Gln
                                105
                                                    110
           100
Gln Ser Glu Ser Ile Ile Met Pro Ser Gly Thr Phe Ser Thr Ala Asn
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                                                125
Gln Lys Ala Leu Gly Leu Glu Ile Met Lys Leu Lys Phe Asp Phe
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gegetgetgg aattegaage caccacegaa gaagtegeea accaegeeet ggaaacette
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qaqcactqcq ttqaqcaqqq ctqqqtqctq qacqqcqtga tgagccagag cgaaacccaa
ctgcacaacc tgtggaaact gcgcgagtac atctcggaga ctatttccca ctggacgccc
tacaagaacg acateteegt gacegtttee aaagteeecg egttettgaa ggaaattgae
gegategteg tgageattac eeggaetteg aaattgttgg teggeeacat eggegaegea
420
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421
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Asp Lys Ala Leu Ala Lys Val Met Gly Arg Gly Asp Val Pro Ala Pro
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Phe Glu Thr Glu Cys Pro Phe Tyr Ala Leu Leu Glu Phe Glu Ala Thr
Thr Glu Glu Val Ala Asn His Ala Leu Glu Thr Phe Glu His Cys Val
                                           60
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Glu Gln Gly Trp Val Leu Asp Gly Val Met Ser Gln Ser Glu Thr Gln
                    70
                                        75
Leu His Asn Leu Trp Lys Leu Arg Glu Tyr Ile Ser Glu Thr Ile Ser
                                    90
               85
His Trp Thr Pro Tyr Lys Asn Asp Ile Ser Val Thr Val Ser Lys Val
                                105
                                                   110
Pro Ala Phe Leu Lys Glu Ile Asp Ala Ile Val Val Ser Ile Thr Arg
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gettatatge ttagtggtta tggcccetae cactgttttt gaccgcgcta ccattcgcca
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ccgtcctgca acagagtcta aagccgctga gacggactgc tcagtacatg gggatctctg
gacettggee aeggaagttt teggteaage aeeegaatte gaetteeeat atatgaaaet
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cacteggeag gaatgtaggt teetttttet geogagaaac gacateaget tgagetgett
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cacg
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           20
Thr Thr Val Phe Asp Arg Ala Thr Ile Arg His Asn Leu Thr Glu Phe
                            40
                                                45
Lys Leu Arg Trp Ile Ser His Ala Glu Gln Trp Lys Ala Glu Asn Arg
   50
                       55
Pro Ala Thr Glu Ser Lys Ala Ala Glu Thr Asp Cys Ser Val His Gly
                    70
                                        75
Asp Leu Trp Thr Leu Ala Thr Glu Val Phe Gly Gln Ala Pro Glu Phe
                85
Asp Phe Pro Tyr Met Lys Leu Thr Arg Gln Glu Cys Arg Phe Leu Phe
           100
                                105
Leu Pro Arg Asn Asp Ile Ser Leu Ser Cys Phe Thr
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<212> DNA
<213> Homo sapiens
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ggcgaaaagg ggctaggaaa tggctcgtgc tcttacggcc ttgcgaacag tgatgacatt
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cgtacgtatg cgcctgtgct gatggtcatg acaacgtgga atgccacgat cctaggcccg
gccaactcgg tgcatgagaa ccgcatatac tgcctgcgcc tcgtgtgtgg cgactcgtac
cctcttgtgc cgcctgagat ttggttccag acgcgcatca acttgccgtg cgtcgatgcc
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actatggaaa gctgctgcat g
441
<210> 1468
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Met Ala Gln Val Pro Arg Asn Phe Arg Leu Leu Glu Glu Leu Glu Lys
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Gly Glu Lys Gly Leu Gly Asn Gly Ser Cys Ser Tyr Gly Leu Ala Asn
Ser Asp Asp Ile Arg Thr Tyr Ala Pro Val Leu Met Val Met Thr Thr
                                                45
       35
                            40
Trp Asn Ala Thr Ile Leu Gly Pro Ala Asn Ser Val His Glu Asn Arg
                                            60
                        55
Ile Tyr Cys Leu Arg Leu Val Cys Gly Asp Ser Tyr Pro Leu Val Pro
                    70
                                        75
Pro Glu Ile Trp Phe Gln Thr Arg Ile Asn Leu Pro Cys Val Asp Ala
                85
                                    90
His Thr Gly Arg Val Met Pro Asp Gln Phe Ser Pro Leu Leu His Trp
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Arg Asp Glu Tyr Thr Met Glu Ser Cys Cys Met
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ttggcattag gegtgteteg egaagacace aatatgatte tttetatgte attaattatt
180
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tcagggatcg cgactttctt gcaatgtaaa aaagttggtc catttggcgc tggattactt
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Ala Phe Leu Ala Ala Leu Gln His Leu Leu Ala Ile Leu Val Pro Ile
                                                    30
           20
                                25
Val Thr Xaa Gly Leu Leu Ile Cys Leu Ala Leu Gly Val Ser Arg Glu
                                                45
        35
                            40
Asp Thr Asn Met Ile Leu Ser Met Ser Leu Ile Ile Ser Gly Ile Ala
                                            60
    50
                        55
Thr Phe Leu Gln Cys Lys Lys Val Gly Pro Phe Gly Ala Gly Leu Leu
                                        75
                    70
Ile Val Gln Gly Thr Ser Phe Asn Phe Ile Gly Pro Ile Ile Gly Ile
                                    90
                85
Gly Ser Ser Met Val Ala Ala Gly Thr Pro Val Glu Gln Val Met Ala
                                105
                                                    110
            100
Ala Ile Phe Gly Val Val Ile Ala Gly Ser Phe Ile Glu Met Gly Val
                            120
                                                125
        115
Ser Gln Ile Leu Pro Trp Val Lys Lys Leu Ile Thr Pro Leu Val Thr
                        135
                                            140
Gly Ile Val Val Leu Leu Ile Gly Leu Pro Leu Met
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tacgettate tgeegtttat ggtactgeec atttataegg egetgaegeg cattgattae
togotggtgg aggeotoact ggatotoggt geocgtocge tgaaaacgtt tttcaatgtg
240
attgtcccgc tcaccaaagg cggcattatc gcggggtcga tgctggtgtt tatcccggcg
300
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qtcqgtgagt ttgttatccc ggaactgctc ggcggcggcc g
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             20
 Leu Ala Val Tyr Ile Gly Ile Val Tyr Ala Tyr Leu Pro Phe Met Val
                             40
 Leu Pro Ile Tyr Thr Ala Leu Thr Arg Ile Asp Tyr Ser Leu Val Glu
 Ala Ser Leu Asp Leu Gly Ala Arg Pro Leu Lys Thr Phe Phe Asn Val
                                        75
                     70
 Ile Val Pro Leu Thr Lys Gly Gly Ile Ile Ala Gly Ser Met Leu Val
                                     90
                 85
 Phe Ile Pro Ala Val Gly Glu Phe Val Ile Pro Glu Leu Leu Gly Gly
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 Gly
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 ataaaatgcc agttccaatt tcacaagtgg tgtcctcagc tttcttggaa aatgtctctt
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 getecacett tttataagea atttggteeg attttaceat etttgteeat gg
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 Met Val Lys Ser Asp Gln Ile Ala Tyr Lys Lys Val Glu Leu Val Glu
                 5
                                    10
  1
 Glu Thr Arg Gln Leu Asp Ser Thr Tyr Phe Arg Lys Leu Gln Ala Leu
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20
                                25
                                                    30
His Lys Glu Thr Phe Ser Lys Lys Ala Glu Asp Thr Thr Cys Glu Ile
                          40
                                                45
        35
Gly Thr Gly Ile Leu Ser Leu Ser Asn Val Ser Lys Arg Thr Glu Tyr
                      55
                                          60
Trp Asp Asn Val Pro Ala Glu Tyr Lys His Phe Lys Phe Ser Asp Leu
65
                   70
                                       75
Leu Asn Asn Lys Leu Glu Phe Glu His Phe Arg Gln Phe Leu Glu Thr
               85
                                   90
His Ser Ser Ser Met Asp Leu Met Cys Trp Thr Asp Ile Glu Gln Phe
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Arq
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389
<210> 1476
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Met Val Leu Ala Pro Val Arg Pro Asn His Ser Ser Thr Ser Ile Ser
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Ser Ser Leu Lys Thr Arg Pro Ser Ser Gly Gln His Cys Ser Lys Ser
          20
                               25
Trp Cys Trp Leu Ser Val Ser Val Pro Arg Gly Lys Gly Thr Phe Ala
       35
                           40
                                               45
Gln Ala Arg Val Val Gln Val Ile Ile Lys Asp Arg Ile Glu Val Arg
Leu Arg Arg Ala Thr Arg Arg His Phe Ser Gly Arg Gly Cys Phe Glu
                70
                                      75
65
Asn Tyr Pro Cys Tyr Thr Ser Arg Pro Ile Phe Pro Cys Pro Gly Met
                                   90
                                                       95
Ala Ser Asn Met Pro Arg Arg Val Phe Ser Pro Pro Tyr Gly Glu Gly
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Asp Asn Arg Ser Leu Thr Gly Trp Cys
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240
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Gly Phe Glu Gln Phe Leu Pro Tyr Leu Leu Gly Gln Thr Asp Gly Gln
           20
                                25
                                                    30
Pro Lys Asp Ala Gln Trp Ala Ser Ala Leu Cys Gly Ile Asp Ala Glu
       35
                            40
Ile Ile Arg Ala Leu Ala Arg Gln Met Ala Ala Asn Arg Thr Gln Ile
                        55
                                            60
Ile Ala Gly Trp Cys Val Gln Arg Met Gln His Gly Glu Gln Trp Ala
                                       75
Trp Met Thr Val Val Leu Ala Ala Met Leu Gly Gln Ile Gly Leu Pro
                                                        95
                                    90
                85
Gly Gly Gly Phe Gly Phe Gly Trp Pro Ser Asn Gly Ala Gly Thr Pro
                                                    110
            100
                                105
Glu Pro Gln Gly Val Ile Leu Ser Gly Phe Ser Gly Ser Pro Ala Thr
                                                125
                            120
       115
Pro Ala Arg His Ala Lys Gly Asp Phe Lys Gly Tyr Ser Ser Thr Ile
                        135
                                            140
Pro Ile Ala Arg Phe Ile Asp Ala Met Leu Glu Pro Gly Lys Glu Ile
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160
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Asp Trp Asn Gly Lys Arg
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<210> 1479
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cgctgggctt tttttgtttg ctgttttggg tggggtgtgc tagtgcagtg tccggtgtac
180
gettttgtcc tcaaacaggc ttgttccccg gtcagagttt cattattgtt gctggtaaac
aaatgccaag tttgacaaaa aacagtgaaa taaagcaaaa gattttgaaa aatgcttcat
catgicagaa ggaaagaacc cttttcacgg gigccigccc acatttcctt gcccagccig
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Val Leu Tyr Ile Glu Thr Glu Arg Lys Glu Asp Arg Lys Asn Gly Ala
                                                   30
           20
                               25
Ser Thr Leu Gly Phe Phe Cys Leu Leu Phe Trp Val Gly Cys Ala Ser
       35
                           40
                                               45
Ala Val Ser Gly Val Arg Phe Cys Pro Gln Thr Gly Leu Phe Pro Gly
                                          60
                       55
  50
Gln Ser Phe Ile Ile Val Ala Gly Lys Gln Met Pro Ser Leu Thr Lys
                                       75
                   70
Asn Ser Glu Ile Lys Gln Lys Ile Leu Lys Asn Ala Ser Ser Cys Gln
                                   90
               85
Lys Glu Arg Thr Leu Phe Thr Gly Ala Cys Pro His Phe Leu Ala Gln
                               105
           100
Pro Glu Thr Leu Leu Thr Leu Asn Tyr Leu Leu Leu Phe Tyr Phe Tyr
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Glu Asn Tyr Ile Arg
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<210> 1481
<211> 545
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agttgcgctc cctgctcgag gagatcgagg cctcaccggc ctcccactaa ctgacccggt
tegegacgag egagttgteg categggeea aeggtgtgta gacaagteag catgageace
gagaacccag tggttaaggc cattgccgat gcgttgtcgc acgtcaatga ccccgagatc
aaacqcccca ttaccqatct caacatqatt gatgagatta ccgtcgacga gcaaggacgc .
getttegtee geateetget gaeegtegee gggtgteece teaagaeega getgegtgag
420
caggecaccg aggetgtgcg cagegttgac ggggtgacca gtgtttccgt cgaactcggc
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540
cgcgt
545
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<212> PRT
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1
His Val Asn Asp Pro Glu Ile Lys Arg Pro Ile Thr Asp Leu Asn Met
         ` 20
                                                    30
                                25
Ile Asp Glu Ile Thr Val Asp Glu Gln Gly Arg Ala Phe Val Arg Ile
                            40
Leu Leu Thr Val Ala Gly Cys Pro Leu Lys Thr Glu Leu Arg Glu Gln
                                            60
                        55
Ala Thr Glu Ala Val Arg Ser Val Asp Gly Val Thr Ser Val Ser Val
Glu Leu Gly Thr Met Thr Asp Glu Gln Arg Asp Ala Leu Lys Val Gln
                                    90
Leu Arg Gly Asp Val Pro Glu Arg
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<210> 1483
<211> 625
<212> DNA
<213> Homo sapiens
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120
gcatcctggc ccctggagcc tgagggccct cgagtaacac gggtggaagt gacgatggaa
ggcggctacg acattttgca tgatgtgtcc tgtgcactaa ggcagcccat tcgttcattg
tatcgtaccc atgttatccg gcgtttctgg aacacgctgc agagcatcaa ccagacagac
cagatgettg eccacettea gteettetee teagtgeetg ageattteae getteetgae
agcaccaaga geggagtgee actettetae atceetecag getecaccae eceggtgete
tecetecage ccagtggtte tgaeteatee catgeccagt ttgetgeeta etggaageee
aqtqctqtcc atqqatqcaa attcctggca gcgatggctg cacatgcatc gcctggtgct
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Gly Gly Ser Gln Leu Glu Val Lys Leu Val Leu Leu Trp Lys His Asn
            20
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                                                    30
Met Arg Ile Glu Tyr Val Ala Met Ala Ser Trp Pro Leu Glu Pro Glu
                            40
       35
Gly Pro Arg Val Thr Arg Val Glu Val Thr Met Glu Gly Gly Tyr Asp
                                            60
    50
                        55
Ile Leu His Asp Val Ser Cys Ala Leu Arg Gln Pro Ile Arg Ser Leu
                                        75
Tyr Arg Thr His Val Ile Arg Arg Phe Trp Asn Thr Leu Gln Ser Ile
                                    90
                85
Asn Gln Thr Asp Gln Met Leu Ala His Leu Gln Ser Phe Ser Ser Val
                                105
Pro Glu His Phe Thr Leu Pro Asp Ser Thr Lys Ser Gly Val Pro Leu
                                                125
                           120
       115
Phe Tyr Ile Pro Pro Gly Ser Thr Thr Pro Val Leu Ser Leu Gln Pro
                        135
                                            140
Ser Gly Ser Asp Ser Ser His Ala Gln Phe Ala Ala Tyr Trp Lys Pro
                                        155
                    150
Ser Ala Val His Gly Cys Lys Phe Leu Ala Ala Met Ala Ala His Ala
                165
                                    170
Ser Pro Gly Ala Asn Pro Gly Ala
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<210> 1485
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1232

<212> DNA <213> Homo sapiens <400> 1485 ntatgttcag cgttcaacga tattggctac cactatggtg ccatggtcgt cgatgctgcg ctgttcctgc cacagtcacg acccagacta tttatcattg gtgtcagaaa cgatattttt gttggcgata ttacttctga atcaccgtct aaaatgtggc ataccagaac tttattgaat 180 gcctacagea atctgaaaga tgatgccaag tccaattggg tatggtggga cettectatg ccagcccaga gaaaatctgc tttcgccgat ttgattgaag aaaatcctag cagcgttaag 300 tggcatacce ggaaggaaac acagcagete ttggatatga tgactgatgt taacttaget aaggttgagg ctgcaaaaaa gctatcgatc gagtctaagg aaaatgttgt agggacaatt 420 tataaaagaa ctcgcaccga tagctttgga gttaaagcgc agcgtgctga agtgcggttt gatgatgttg ccggttgtct tcgcacccct ggagggggt caagtcggca agtcataatg 540 gtcgttgata acgggactgt aaaaacgagg ttgatctcaa gtagagaaac tgcaaggctt atggggttac ccgacgaata catattgcca aaaaattata atgaggcgta tcacttaacg ggtgatggtg ttgtagtgcc ggttgtatcc cacatagcca ctcatatttt tgacccagtg atggagcgtg tgtttgagga tgcggcggga ctgcttaagc aaatcgcata gcatcgtttt qqcaqqaaqa tatgagcgtt attccgtgta aaaaggacct tcagctaaaa aaattgattg aatcctatgc agaagccttg aaagttgagg cccataagct aggagagcat ggattaactg 900 aagctgaatt ttatgatagc ggcctctttc ggggggctat cgagcgaatt cgaggacagt 960 teteegegae catgegggag aaaagaaatt tegttaagea tgttttaaat tacatgeagg ataacgacta cattgctgat tgggagtcgg ctggtgaatc gaatcgccat gattatatgg 1080 taactctcaa ttctgggcgc aaagctgcta ttgagctgaa agggtgcctt gatggcaata acactaacat ctttgatcgc ccccctcagg cagaagaatt tgttatctgg agtgtatgca 1200 caaatcctgg tgctgaccct cagcataatg tttggtctgg gcttcacacc agactaagtg ctgaaatcat ttcacgggag caaaggattg atggaatggt catttgggac tgggcttgtg 1320 gaacagtcgg aaggccatgc cccaaaatag caactgaacc tgagcgggct gtaacatttg ggccgttcaa attgccgcca ccatgtttgt atcttttacc ttcgacgatt ccaagcccaa qaaacaaccc gtctccaaga gctcagcaga ttgaagacgt gcagctaatc aaagcgtttc 1500

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acgattgttt tgggtgccgg tctgaagaag ttaatttcgt taactttgat gttggttatc
1560
atggtaaaga taccgtccgt aaaacgacta tcattcgaaa cggcatggtg gagcgtgaat
1620
cggaaatgac ggcaataagg cggtcttaat ttgtgcatgc ctatgctgca tgaatccgca
tgatcgtttg aggatcgttt ttgctgaggc ccgccagttc tggtgggctt ttgcttatgt
1740
catgcacctg catgaaaacc gctacataaa gcgggcaggc gtggcgggga tacgagcgcg
cgcaacgggg tgaaatggtg aatatcaggg gcaatctccg gcacgctggc ggcttgaatc
1860
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gtgagaggtg gtcttgttgt cgcggtgcgg tgggtcagtc gtagcgattg tcttctgtca
1980
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gcagtcgctt ctgcaggc
2058
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<212> PRT
<213> Homo sapiens
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Val Asp Ala Ala Leu Phe Leu Pro Gln Ser Arg Pro Arg Leu Phe Ile
                                                    30
                                25
           20
Ile Gly Val Arg Asn Asp Ile Phe Val Gly Asp Ile Thr Ser Glu Ser
                                                45
       35
                            40
Pro Ser Lys Met Trp His Thr Arg Thr Leu Leu Asn Ala Tyr Ser Asn
    50
Leu Lys Asp Asp Ala Lys Ser Asn Trp Val Trp Trp Asp Leu Pro Met
                    70
                                        75
65
Pro Ala Gln Arg Lys Ser Ala Phe Ala Asp Leu Ile Glu Glu Asn Pro
                                    90
Ser Ser Val Lys Trp His Thr Arg Lys Glu Thr Gln Gln Leu Leu Asp
                                105
            100
Met Met Thr Asp Val Asn Leu Ala Lys Val Glu Ala Ala Lys Lys Leu
                            120
        115
Ser Ile Glu Ser Lys Glu Asn Val Val Gly Thr Ile Tyr Lys Arg Thr
                                            140
   130
                        135
Arg Thr Asp Ser Phe Gly Val Lys Ala Gln Arg Ala Glu Val Arg Phe
                    150
                                        155
Asp Asp Val Ala Gly Cys Leu Arg Thr Pro Gly Gly Gly Ser Ser Arg
                                    170
                165
Gln Val Ile Met Val Val Asp Asn Gly Thr Val Lys Thr Arg Leu Ile
                                                    190
            180
                                185
Ser Ser Arg Glu Thr Ala Arg Leu Met Gly Leu Pro Asp Glu Tyr Ile
       195
                            200
                                                205
Leu Pro Lys Asn Tyr Asn Glu Ala Tyr His Leu Thr Gly Asp Gly Val
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220
    210
                        215
Val Val Pro Val Val Ser His Ile Ala Thr His Ile Phe Asp Pro Val
                    230
                                        235
Met Glu Arg Val Phe Glu Asp Ala Ala Gly Leu Leu Lys Gln Ile Ala
                245
                                    250
                                                        255
<210> 1487
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<212> DNA
<213> Homo sapiens
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catcaqqqaa tqctqqqqaa aaaaagcact ccaggcccag ggatcagcaa agcacaggat
gcctggggga acacacagcc tcagagcatt tgaggaacag aaaaggcaac gtgactaagc
240
ttcctggggc ggtgaggtca ggcagggagg tgggtgcgag gtcatggggc cgcaggcaaa
eggecetece teccagtgee ceacatgeag gecetggage accaggageg gggaggetee
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tgggagagge cggcagtgag ggaagaatgg ccctcggtcg tgcgtagaga atgtagggga
cacagggeet eteaeggace cagateetga tettgteaga tetgeaegee egtgggaggg
tgctggcggc agaaacgcgt tgccataagc cttctcccca ctgcaggcag gtgtggtcag
gggacctcct tggagaacaa ggtgggggaa tttggcagct ttctcagcat ggcgtccatc
660
coccetacat tectqqqqca cocactqtaq qocaqqccct gtgccggatc tgatgataca
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caacccaata tgttaaaatc cagtgtcagg acccnaggag aag
823
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<212> PRT
<213> Homo sapiens
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Met Leu Gly Arg Ser Cys Glu Gly Lys Phe Arg Lys Asp Leu Ser Glu
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                5
                                    10
Gln Val Thr Phe Gln Leu Arg Leu Gly Arg Met Arg Arg Ser Gln Glu
                                                    30
            20
                                25
Leu Gln Ala Ser Gly Asn Ala Gly Glu Lys Lys His Ser Arg Pro Arg
                            40
       35
Asp Gln Gln Ser Thr Gly Cys Leu Gly Glu His Thr Ala Ser Glu His
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55
                                            60
Leu Arg Asn Arg Lys Gly Asn Val Thr Lys Leu Pro Gly Ala Val Arg
                                        75
                  70
Ser Gly Arg Glu Val Gly Ala Arg Ser Trp Gly Arg Arg Gln Thr Ala
               85
                                    90
Leu Pro Pro Ser Ala Pro His Ala Gly Pro Gly Ala Pro Gly Ala Gly
                                                    110
            100
                               105
Arg Leu Arg Gly Val Ser Ser Cys Lys Trp Pro Ala Phe Gly Ser Ile
                           120
       115
Ser Pro Phe Ser Trp Gly Leu Gly Glu Ala Gly Ser Glu Gly Arg Met
                        135
Ala Leu Gly Arg Ala
145
<210> 1489
<211> 342
<212> DNA
<213> Homo sapiens
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gegattgeet gegeegtggg tgeeggeate aaccaggaeg ceategtgeg eggeetegaa
gccttcgccc cggtcggcgg acgtttgcag cgcaagcagg ccgccagcgg cgcgcccgtc
180
attgacgaca cccacaaccc caatcccaat tcaatgcgcc cggcgatcga cgtgctggcc
cgcgtacccg cgccgcgcat cctggtggtg ggcgacatgg gcgaagtcgg cgcacaggga
aaagaatttc acgaagaaat cggggcttac gcacacacgc gt
342
<210> 1490
<211> 114
<212> PRT
<213> Homo sapiens
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1
                                    10
Asn Ala Leu Ala Ala Ile Ala Cys Ala Val Gly Ala Gly Ile Asn Gln
                                25
            20
Asp Ala Ile Val Arg Gly Leu Glu Ala Phe Ala Pro Val Gly Gly Arg
                            40
Leu Gln Arg Lys Gln Ala Ala Ser Gly Ala Pro Val Ile Asp Asp Thr
                       55
His Asn Pro Asn Pro Asn Ser Met Arg Pro Ala Ile Asp Val Leu Ala
                                        75
                    70
Arg Val Pro Ala Pro Arg Ile Leu Val Val Gly Asp Met Gly Glu Val
                                    90
                85
Gly Ala Gln Gly Lys Glu Phe His Glu Glu Ile Gly Ala Tyr Ala His
                                                    110
                                105
Thr Arg
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<210> 1491
<211> 333
<212> DNA
<213> Homo sapiens
<400> 1491
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tgggggtcag gtcccactcc caaaggagta gccatcaccc acgagtcggc ggtcaatacg
attgtcgatg tcaacgaacg cctcggggtg actccgaccg accggatatt ggggatttca
qaqctaaact tcgatctatc ggtatacgac atcttcggga tgttcgcgcg gggtgctacc
300
ttggtgttgc catctccagc agacaaacgt gat
333
<210> 1492
<211> 91
<212> PRT
<213> Homo sapiens
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Met Gly Val Asp Tyr Leu Ser Ser Gln Leu Asp Trp Ala Gly Tyr Gln
                                    10
Val Ser Thr Thr Trp Gly Ser Gly Pro Thr Pro Lys Gly Val Ala Ile
                                                     30
            20
                                25
Thr His Glu Ser Ala Val Asn Thr Ile Val Asp Val Asn Glu Arg Leu
                            40
                                                45
       35
Gly Val Thr Pro Thr Asp Arg Ile Leu Gly Ile Ser Glu Leu Asn Phe
                        55
                                            60
    50
Asp Leu Ser Val Tyr Asp Ile Phe Gly Met Phe Ala Arg Gly Ala Thr
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Leu Val Leu Pro Ser Pro Ala Asp Lys Arg Asp
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cccttgcccc cgaagccagg ccctggctca ccctcccacc cgggtgccct tgacttggat
120
ggtgtttccc ggcagcagaa cgcggtgggc agggagaagg agctgctcag cagccagagg
180
gacgggcggt ttgaaggccg cccggtgccc gacggtgacg ccaagcagag atcaccaaag
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atgaggcaga gacccctcc tcgccgggac atgaccattc ctcgaggcct caacctgccg
300
aagccgccca tcccgcccca agtggaggaa gagtattaca ccatcgccga attccagaca
360
accatcccag acggcatcag cttccaggca ggcctgaagg tcgaggtgat cgagaaaaac
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540
cacqaqqtqa cccaqctccq qctgggggaa gcagcagcgc tggagaacaa cacgggcagc
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660
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780
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900
ccgatgatgc cagccaaaca catccttca gcccgggaca gcaggaggcc agagcccaaa
cctgacaaaa gcagactgtt ccagctgaaa aatgacatgg ggctggagtg tggccacaag
1020
gtettggeca aggaagtgaa gaageecaae eteeggeeca tetecaaate caaaaetgae
1080
ctgccagagg agaagccaga tgccactccc cagaatccct tcttgaagtc cagacctcag
gttaggccaa aaccagetee tteeeccaaa aeggagecae eteagggega agaccaagte
1200
gacatotgca acctcaggag taagetcagg cetgecaagt eccaagacaa gteettgttg
1260
gatggggagg gcccccaggc agtagggggc caagacgtgg ccttcagccg aagctt
1316
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<211> 438
<212> PRT
<213> Homo sapiens
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Xaa Tyr Gln Gly Lys Glu Gly Trp Ala Pro Ala Ser Tyr Leu Lys Lys
                                                        15
                                   10
Asn Ser Gly Glu Pro Leu Pro Pro Lys Pro Gly Pro Gly Ser Pro Ser
                                25
                                                    30
            20
His Pro Gly Ala Leu Asp Leu Asp Gly Val Ser Arg Gln Gln Asn Ala
        35
                            40
                                                45
Val Gly Arg Glu Lys Glu Leu Leu Ser Ser Gln Arg Asp Gly Arg Phe
                        55
                                            60
    50
Glu Gly Arg Pro Val Pro Asp Gly Asp Ala Lys Gln Arg Ser Pro Lys
                                        75
65
                    70
Met Arg Gln Arg Pro Pro Pro Arg Arg Asp Met Thr Ile Pro Arg Gly
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85
                           90
                                          95
Leu Asn Leu Pro Lys Pro Pro Ile Pro Pro Gln Val Glu Glu Glu Tyr
      100 105
                              110
Tyr Thr Ile Ala Glu Phe Gln Thr Thr Ile Pro Asp Gly Ile Ser Phe
      115 120
                            125
Gln Ala Gly Leu Lys Val Glu Val Ile Glu Lys Asn Leu Ser Gly Trp
 130 135 140
Trp Tyr Ile Gln Ile Glu Asp Lys Glu Gly Trp Ala Pro Ala Thr Phe
             150
                             155
Ile Asp Lys Tyr Lys Lys Thr Ser Asn Ala Ser Arg Pro Asn Phe Leu
           165 170
                                  175
Ala Pro Leu Pro His Glu Val Thr Gln Leu Arg Leu Gly Glu Ala Ala
        180
                      185
                                      190
Ala Leu Glu Asn Asn Thr Gly Ser Glu Ala Thr Gly Pro Ser Arg Pro
  195 200
                                   205
Leu Pro Asp Ala Pro His Gly Val Met Asp Ser Gly Leu Pro Trp Ser
      215
                      220
Lys Asp Trp Lys Gly Ser Lys Asp Val Leu Arg Lys Ala Ser Ser Asp
225 230 235 240
Met Ser Ala Ser Ala Gly Tyr Glu Glu Ile Ser Asp Pro Asp Met Glu
           245 250
Glu Lys Pro Ser Leu Pro Pro Arg Lys Glu Ser Ile Ile Lys Ser Glu
     260 265 270
Gly Glu Leu Leu Glu Arg Glu Arg Glu Arg Gln Arg Thr Glu Gln Leu
          280
Arg Gly Pro Thr Pro Lys Pro Pro Gly Val Ile Leu Pro Met Met Pro
                         300
      295
Ala Lys His Ile Pro Pro Ala Arg Asp Ser Arg Arg Pro Glu Pro Lys
       310
                             315
Pro Asp Lys Ser Arg Leu Phe Gln Leu Lys Asn Asp Met Gly Leu Glu
         325 330 335
Cys Gly His Lys Val Leu Ala Lys Glu Val Lys Lys Pro Asn Leu Arg
       340 345
                               350
Pro Ile Ser Lys Ser Lys Thr Asp Leu Pro Glu Glu Lys Pro Asp Ala
     355 360
                                   365
Thr Pro Gln Asn Pro Phe Leu Lys Ser Arg Pro Gln Val Arg Pro Lys
 370 375 380
Pro Ala Pro Ser Pro Lys Thr Glu Pro Pro Gln Gly Glu Asp Gln Val
    390
                            395
Asp Ile Cys Asn Leu Arg Ser Lys Leu Arg Pro Ala Lys Ser Gln Asp
         405 410 415
Lys Ser Leu Leu Asp Gly Glu Gly Pro Gln Ala Val Gly Gly Gln Asp
                      425
Val Ala Phe Ser Arg Ser
     435
<210> 1495
<211> 329
<212> DNA
<213> Homo sapiens
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ctqqaqqctq caaqqaqgat ggccccatc acggcggacc tacatgctgg gagtccggga
gagggcaggc cgcggacatg gggcatgtgg cgatgtgttt caccacccac tcccgcctga
180
agtgccactg tgagcccaac ccacggtgcc aggctgggct gcactccagg ctcctgcagc
agacccacct cctcagcctc cttcccctga aggetgggca tggcctggac aaagggtgtc
ctcctctgct gtgccatgct gacgtggca
329
<210> 1496
<211> 105
<212> PRT
<213> Homo sapiens
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                                                        15
Gln Gly Lys Glu Ala Glu Glu Val Gly Leu Leu Gln Glu Pro Gly Val
            20
                                25
Gln Pro Ser Leu Ala Pro Trp Val Gly Leu Thr Val Ala Leu Gln Ala
       35
                            40
                                                45
Gly Val Gly Gly Glu Thr His Arg His Met Pro His Val Arg Gly Leu
                        55
   50
Pro Ser Pro Gly Leu Pro Ala Cys Arg Ser Ala Val Met Gly Ala Ile
                                        75
                    70
Leu Leu Ala Ala Ser Arg Arg Lys Gln Ser Thr Ala Leu Met Glu Asp
                85
Glu Val Ala Pro Leu Arg Asp Arg Asp
                                105
            100
<210> 1497
<211> 345
<212> DNA
<213> Homo sapiens
<400> 1497
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ccgttgatcg cgcgaatgcg acgggtgggg cagggcgtgc ggccgacacc accgcaagaa
cgcaactcac ggcagatgaa tctgttttga aacgcaagga agggtaatga caggcaccga
240
caagaagegg atecegeage tgetgegtgt tgageteact gaacttaeeg geeegatega
geageettae gegeeegatg caegteatte tttegggeea egegt
345
<210> 1498
<211> 104
<212> PRT
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Gln Ser Lys Leu Ile Asp Thr Leu Gly Pro Glu Pro Leu Ser Glu Asn

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70
Phe Asn Ala Glu Tyr Leu Phe Glu Lys Leu Lys Asn Lys Lys Val Gly
                         90
              85
Thr Lys Val Ala Ile Met Asp Asn His Val Val Val Gly Val Gly Asn
          100
                              105
Ile Tyr Ala Thr Glu Ser Leu Phe Asn Leu Gly Ile His Pro Ala Gln
                           120
       115
Pro Ala Ser Thr Leu Ser
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<211> 362
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gtgccgagcg cgcgcgagcg cgacttcgtg aagatcttcg acttcggcgc atgccagatg
gtcacaccga aggtatcgaa cggcgtgccc gagctgaaga cgagcgcggg aaatctcttc
180
ggcacggtgc cgtacatggc gccggagtgc ttcgaggacg gctcgcaccg gctggatgcg
cgcgcggaca tctactccac gggcatcatc atgtaccgct gcgtgacggg gacgctcccc
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tt
362
<210> 1502
<211> 120
<212> PRT
<213> Homo sapiens
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Xaa Arg Val His Ala Ala Gly Ile Ile His Arg Asp Leu Lys Pro Gln
                                   10
1
Asn Ile Phe Leu Val Pro Ser Ala Arg Glu Arg Asp Phe Val Lys Ile
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Phe Asp Phe Gly Ala Cys Gln Met Val Thr Pro Lys Val Ser Asn Gly
                           40
Val Pro Glu Leu Lys Thr Ser Ala Gly Asn Leu Phe Gly Thr Val Pro
Tyr Met Ala Pro Glu Cys Phe Glu Asp Gly Ser His Arg Leu Asp Ala
                  70
Arg Ala Asp Ile Tyr Ser Thr Gly Ile Ile Met Tyr Arg Cys Val Thr
                                   90
Gly Thr Leu Pro Phe Lys Ala Asn Thr Val Phe Glu Met Leu Ile His
                             105
          100
Leu Arg Glu Gly Arg Pro Ser Ser
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<211> 623
<212> DNA
<213> Homo sapiens
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gggctcatga cgacccctcc tgaacactgt tcaaagggcg acggcttacc attcctcgct
gtgagteetg aacagcaget tetegaatat gaccgaegte atgtetggea cecetaegee
ccgacgatcg gggcagaccc aatgcttgca gtgacggctg ccaacggagt ctggctgcag
ctgcatgatg gggaacaccg ccacgaggtc atcgatgcga tggcctcgtg gtggtgccag
attcacggtt accgaaaccc ggtcctcgac gaggccctca accgtcaaag ctcccagttc
agtcacgtca tgtttggcgg actcacccat aaggccgcgg ttgacgccgt catatcccta
gtgcgcctgg ccccggggcc cctcgaccgg atcttcctgg ctgattccgg gtctgtcggc
540
gtcgaggtga gtctcaaatt ggctcgtcag gtgcaaatcg ctcgcaccgc agcgcgcggc
600
ggcactttga cgaggacacg cgt
623
<210> 1504
<211> 165
<212> PRT
<213> Homo sapiens
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Met Thr Thr Pro Pro Glu His Cys Ser Lys Gly Asp Gly Leu Pro Phe
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1
                5
Leu Ala Val Ser Pro Glu Gln Gln Leu Leu Glu Tyr Asp Arg Arg His
                                                    30
            20
                                25
Val Trp His Pro Tyr Ala Pro Thr Ile Gly Ala Asp Pro Met Leu Ala
                            40
        35
Val Thr Ala Ala Asn Gly Val Trp Leu Gln Leu His Asp Gly Glu His
    50
                        55
                                            60
Arg His Glu Val Ile Asp Ala Met Ala Ser Trp Trp Cys Gln Ile His
Gly Tyr Arg Asn Pro Val Leu Asp Glu Ala Leu Asn Arg Gln Ser Ser
                85
                                    90
Gln Phe Ser His Val Met Phe Gly Gly Leu Thr His Lys Ala Ala Val
           100
                                105
                                                    110
Asp Ala Val Ile Ser Leu Val Arg Leu Ala Pro Gly Pro Leu Asp Arg
                                                125
        115
                            120
Ile Phe Leu Ala Asp Ser Gly Ser Val Gly Val Glu Val Ser Leu Lys
                        135
Leu Ala Arg Gln Val Gln Ile Ala Arg Thr Ala Ala Arg Gly Gly Thr
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160

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150
                                        155
Leu Thr Arg Thr Arg
               165
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<211> 556
<212> DNA
<213> Homo sapiens
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gtttcaatcg gtttgccgaa cagatggcca ggatggccgg cgcctcggcg aaactggacg
acgggggccc cgaaactcgc tgacggcact aaaccttctt cccccggcgc aaccaccttg
getteengea tgacgaaget cageggggga geteageggt tgteagetaa eggeggeaag
ctcaccgacg gtgtctccca gctctccgga gggctcacaa ccttgtctca caagggccag
cageteagee aaggggeega tgggetggee ageggggtgg egaeetaeae egatggeaeg
360
gggaaggtcg tcgacggcat cgggcagctg tcggctggtt tgacgacgat ggatgagaag
420
atcgctgcgg ctaccgggaa aatcgatccc tcccagctcg acaaactcgc cggtggggcc
ggacagettg etgatggeat egaceagtte aceggeaate tggtgggtta tegtaetgag
540
atccgccagt acgcgt
556
<210> 1506
<211> 169
<212> PRT
<213> Homo sapiens
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1
Pro Ala Pro Arg Arg Asn Trp Thr Thr Gly Ala Pro Lys Leu Ala Asp
           20
                                25
Gly Thr Lys Pro Ser Ser Pro Gly Ala Thr Thr Leu Ala Ser Xaa Met
Thr Lys Leu Ser Gly Gly Ala Gln Arg Leu Ser Ala Asn Gly Gly Lys
                                            60
                        55
Leu Thr Asp Gly Val Ser Gln Leu Ser Gly Gly Leu Thr Thr Leu Ser
                                        75
His Lys Gly Gln Gln Leu Ser Gln Gly Ala Asp Gly Leu Ala Ser Gly
                                    90
               85
Val Ala Thr Tyr Thr Asp Gly Thr Gly Lys Val Val Asp Gly Ile Gly
           100
                                105
                                                    110
Gln Leu Ser Ala Gly Leu Thr Thr Met Asp Glu Lys Ile Ala Ala Ala
                                                125
                            120
Thr Gly Lys Ile Asp Pro Ser Gln Leu Asp Lys Leu Ala Gly Gly Ala
```

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140
                        135
   130
Gly Gln Leu Ala Asp Gly Ile Asp Gln Phe Thr Gly Asn Leu Val Gly
                   150
                                        155
Tyr Arg Thr Glu Ile Arg Gln Tyr Ala
               165
<210> 1507
<211> 667
<212> DNA
<213> Homo sapiens
<400> 1507
agatototta agatgtgoto attatoatga gaacagogtg gaggaaacca cocccaggat
ccagttacct ccacttgtcc tgcccttggc acgtggggct tatggggatt acaattcaag
gtgagacttg ggtggggaca cagtggaaca tgaagtgtgc cacgctgggt ggatgacgcc
ctcctcccc cgccaccgag agctgcaggc cacatgattc cttttgggta gcactcggga
aagggcagaa tgtacaggaa cagagtgaga ttcgcagggc ctggggctga gggaggggac
300
gcactagagg aaggcaaagg ggagcctcct gggtgtgggg agcactttct gtcttggttt
tggtggtggc tgcacagtgg cccacacccg tcagagetca cetgeetgca eccaggeeet
ccgtgcaccc tggcagccca gatgactgca ccagcccagg ggaggtggag gaatgccaca
cgcaccggta cctggggacc gggggtcctc ggtgatcatc ccgagetcca agacagaagc
tggactacag ccgtgctgag tggaggggtt tggtggctgg gtgcccgcct cctattgctc
ctgcagactc tggggtctcg ggcgccccca gtggggcaat gtgggctgct gcagggaact
cacgcgt
667
<210> 1508
<211> 139
<212> PRT
<213> Homo sapiens
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Met Tyr Arg Asn Arg Val Arg Phe Ala Gly Pro Gly Ala Glu Gly Gly
                                    10
Asp Ala Leu Glu Glu Gly Lys Gly Glu Pro Pro Gly Cys Gly Glu His
                                25
            20
Phe Leu Ser Trp Phe Trp Trp Leu His Ser Gly Pro His Pro Ser
                                                45
                            40
Glu Leu Thr Cys Leu His Pro Gly Pro Pro Cys Thr Leu Ala Ala Gln
                        55
Met Thr Ala Pro Ala Gln Gly Arg Trp Arg Asn Ala Thr Arg Thr Gly
                                        75
                    70
Thr Trp Gly Pro Gly Val Leu Gly Asp His Pro Glu Leu Gln Asp Arg
```

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95
                                    90
Ser Trp Thr Thr Ala Val Leu Ser Gly Gly Val Trp Trp Leu Gly Ala
                                                   110
                               105
           100
Arg Leu Leu Leu Leu Gln Thr Leu Gly Ser Arg Ala Pro Pro Val
       115
                           120
Gly Gln Cys Gly Leu Leu Gln Gly Thr His Ala
   130
                       135
<210> 1509
<211> 463
<212> DNA
<213> Homo sapiens
<400> 1509
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ggtctggctg actccaaagt tgtggctttt gttggttttc ttgttctgtc gcgttttaga
aagggctagg aaccgagcac tgggcgttgg gcttactctc ctcctatggt gacctgggag
tggtgcccaa ggcgctctct tcccagcacc tcagggtcct cactggtaaa ggagggagtg
240
attggaatgt cgccaaagtt acttggctct ggaattctgt ggctattcac gtggactctg
gatggcggtc accaagtaga agaggggccc tgggatagag agaagtctcc tctcctgctc
etgatttece aggestetes etsteetggs setsestest testesact tesceggatt
cccttcgagt ttggttgcaa ctttaatttt nngttccgat tca
<210> 1510
<211> 99
<212> PRT
<213> Homo sapiens
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Met Val Thr Trp Glu Trp Cys Pro Arg Arg Ser Leu Pro Ser Thr Ser
1
Gly Ser Ser Leu Val Lys Glu Gly Val Ile Gly Met Ser Pro Lys Leu
                                25
Leu Gly Ser Gly Ile Leu Trp Leu Phe Thr Trp Thr Leu Asp Gly Gly
His Gln Val Glu Glu Gly Pro Trp Asp Arg Glu Lys Ser Pro Leu Leu
                                           60
Leu Leu Ile Ser Gln Ala Ser Pro Ser Pro Gly Pro Pro Ser Phe Leu
                                        75
Pro Leu Pro Arg Ile Pro Phe Glu Phe Gly Cys Asn Phe Asn Phe Xaa
                                    90
                85
Phe Arg Phe
<210> 1511
<211> 633
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<212> DNA
<213> Homo sapiens
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tcacgcgcca acgtcaccgg caaccatctg ccggactttt tctggatcga cgccgaagtt
ctggtacgcg aggctctcaa cgaccttgac catgacaagg tagtatccat tcctaccccg
ctctggaagt tcttcatcgc agtggccaca cataccccac gttccgctat gagattcctg
tcacgaactc tgtcctcgtc tcgagacaag gacgaccatc ctcgacacac tccgggaggc
gaggcetgag atggeeageg teaaacecae taaggacegg ggeeggtaca ceaatgatet
gtccgccgcg acgcggcagg cagcgaacat gcttctgctg cgtcctttgg tgtggaaagt
cgtcaaagtg agcgtccacg gagccgacaa cctcgacggg ctcgacggtg ccttacgtcg
ccgtcgctaa ccattcctcc cacctcgacg cgccgctcgt ttttgggggcc cttcccaagc
ggetgtcaaa gtacctaget accggggccg ctgctgacta tttcttcacc gtctggtgga
600
aggccatcgc tccggtgctc ttcttcaacg cgt
633
<210> 1512
<211> 102
<212> PRT
<213> Homo sapiens
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Ala Gly Thr Gly Val Lys Ala Met Ala Leu Gly Pro Gly Trp Val His
                                    10
                 5
Thr Glu Phe His Ser Arg Ala Asn Val Thr Gly Asn His Leu Pro Asp
                                                    30
                                25
            20
Phe Phe Trp Ile Asp Ala Glu Val Leu Val Arg Glu Ala Leu Asn Asp
                            40
        35
Leu Asp His Asp Lys Val Val Ser Ile Pro Thr Pro Leu Trp Lys Phe
                        55
                                            60
Phe Ile Ala Val Ala Thr His Thr Pro Arg Ser Ala Met Arg Phe Leu
                    70
Ser Arg Thr Leu Ser Ser Ser Arg Asp Lys Asp Asp His Pro Arg His
                                    90
Thr Pro Gly Gly Glu Ala
            100
<210> 1513
<211> 401
<212> DNA
<213> Homo sapiens
<400> 1513
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acgcgtgaag gggtggaatt tcaccacaga ggggacgccg gggttcctgt tcagaaatat
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ttggtcgtcc aatctcgtaa tgcccttctg aatgacttgc tgggcctgcc tcctgacacg
gctgtttcgc aggaaccgcc actcccgctc cttgcggatc tgactctcca ggtcgtgctc
180
ttctgggatc ttcatgacgg gctgggtaaa atagccgggc gctccagtcg cagaaccccg
totgcaccgt ggcggagatg aaacttttgt gtccagcagc atcgtccgcg tcgtccgcag
tetgetetgg gecettgteg aacatettee gtgteegggg gaactggtgg gagtgagggg
tgtactgcgc cccagcgggg cctgtggtgc ccggccggcc g
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<210> 1514
<211> 108
<212> PRT
<213> Homo sapiens
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Ala Gly His Lys Ser Phe Ile Ser Ala Thr Val Gln Thr Gly Phe Cys
                                25
                                                     30
            20
Asp Trp Ser Ala Arg Leu Phe Tyr Pro Ala Arg His Glu Asp Pro Arg
                            40
                                                 45
Arg Ala Arg Pro Gly Glu Ser Asp Pro Gln Gly Ala Gly Val Ala Val
                        55
Pro Ala Lys Gln Pro Cys Gln Glu Ala Gly Pro Ala Ser His Ser Glu
                                        75
Gly His Tyr Glu Ile Gly Arg Pro Asn Ile Ser Glu Gln Glu Pro Arg
                85
                                    90
Arg Pro Leu Cys Gly Glu Ile Pro Pro Leu His Ala
            100
                                105
<210> 1515
<211> 720
<212> DNA
<213> Homo sapiens
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aactacgage etgacetgae egacgatgeg aegteggtee egetegeegt egteattgae
gateceggee egectaegee tattgegege egecaegaea teagegaate gggeatetat
gagacccatg tcaaagggct aacccgcctt caccccctcg ttcctgagca tcttcgcagc
acctatgecg ggettgeeta teeggetgtt ategaacace teaagteaat eggagtaaca
360
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gccatcgaac tactacccgt ccagcagttc gtctccgaac cattcatcgt tgggcgcggc
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540
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gaaggaccga ctctgtcttt ccgcggcatc gatcacgagt cttattaccg cctcaccaac
gatcaccgca atgactatga cgtcaccggt tgtggcaatt ctgtcgacac ctcccatccg
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Asp Pro Tyr Ala Arg Ala Ile Thr Ala Gly Val Asp Tyr His Gly Pro
           20
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Ile Met Asp His Thr Pro Glu Ser Asn Tyr Glu Pro Asp Leu Thr Asp
       35
                          40
                                              45
Asp Ala Thr Ser Val Pro Leu Ala Val Val Ile Asp Asp Pro Gly Pro
Pro Thr Pro Ile Ala Arg Arg His Asp Ile Ser Glu Ser Gly Ile Tyr
                                      75
                   70
Glu Thr His Val Lys Gly Leu Thr Arg Leu His Pro Leu Val Pro Glu
                                   90
His Leu Arg Ser Thr Tyr Ala Gly Leu Ala Tyr Pro Ala Val Ile Glu
                               105
                                                  110
           100
His Leu Lys Ser Ile Gly Val Thr Ala Ile Glu Leu Leu Pro Val Gln
       115
                          120
                                             125
Gln Phe Val Ser Glu Pro Phe Ile Val Gly Arg Gly Leu Ser Asp Tyr
                       135
                                          140
  130
Trp Gly Tyr Asn Thr Leu Gly Phe Phe Ala Pro His Ala Ala Tyr Cys
                   150
                                     155
Ser Val Gly Ser Met Gly Thr Gln Val Arg Glu Phe Lys Asp Met Val
              165
                                  170
Thr Ser Phe His Glu Ala Gly Ile Glu Val Phe Leu Asp Val Val Tyr
                                                  190
                               185
           180
Asn His Thr Gly Glu Gly Gly His Glu Gly Pro Thr Leu Ser Phe Arg
                           200
                                              205
       195
Gly Ile Asp His Glu Ser Tyr Tyr Arg Leu Thr Asn Asp His Arg Asn
                      215
                                          220
  210
Asp Tyr Asp Val Thr Gly Cys Gly Asn Ser Val Asp Thr Ser His Pro
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<210> 1517
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teaaqqettt ccaetgeage caacattgga cacatggaca cacccaagga getetggegg
atgateactg ggaacatgge ceteatecag gtgcaggeec eggtggtggg ettectggeg
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497
<210> 1518
<211> 165
<212> PRT
<213> Homo sapiens
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Xaa Arg Val Lys Gly Val Arg Glu Glu Asp Ala Leu Leu Glu Asn Gly
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                                    10
Ser Gln Ser Asn Glu Ser Asp Asp Val Ser Thr Asp Arg Gly Pro Ala
                                25
            20
Pro Pro Ser Pro Leu Lys Glu Thr Ser Phe Ser Ile Gly Leu Gln Val
                            40
Leu Phe Pro Phe Leu Leu Ala Gly Phe Gly Thr Val Ala Ala Gly Met
                       55
Val Leu Asp Ile Val Gln His Trp Glu Val Phe Gln Lys Val Thr Glu
                                        75
                   70
Val Phe Ile Leu Val Pro Ala Leu Leu Gly Leu Lys Gly Asn Leu Glu
                                    90
Met Thr Leu Ala Ser Arg Leu Ser Thr Ala Ala Asn Ile Gly His Met
                                105
                                                   110
           100
Asp Thr Pro Lys Glu Leu Trp Arg Met Ile Thr Gly Asn Met Ala Leu
                            120
                                                125
       115
Ile Gln Val Gln Ala Pro Val Val Gly Phe Leu Ala Ser Ile Ala Ala
                                           140
   130
                       135
Val Val Phe Gly Trp Ile Pro Asp Gly His Phe Ser Ile Pro His Ala
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                                                            160
                   150
Phe Leu Leu Cys Gly
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<210> 1519
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<212> DNA
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300			cttcctgaat		
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420			gttgccaggg		
480			attgccggtc		
540			ttcactaaac		
600			acatggcata		
660			ggattaatta		
720			cataaagcca		
780			gtggccagag		
840			cctccaaagg		
900			tgcagtcatc		
960			ttagaggatc		
1020			atactggagc		
1080			cgtatggcac		
1140			gttgggatgt		
1200			atttccttat		
1260			atttcctgtg		
ggccgtgctg 1320	ctttaataac	ttccttctgt	gtgtttaaat	tcatggcatt	gtacagcatt
1380			tctatcttaa		
1440			gtagtggtat		
1500			ccttcgggtc		
tteteegttt 1560	tgtctcagat	tateatetge	attggatttc	aatctttggg	tttttttgg

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gtcaaacagc aaccttggta tgaagtgtgg catccaaaat cagatgcttg taatacaaca
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1860
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gtcctttgga aagttgtgtt caaccgagac aaacaaggag agtatcggtt cagcaccaca
cagccaccgc aggagtcagt ggatcggtgg ggaaaa
2076
<210> 1520
<211> 692
<212> PRT
<213> Homo sapiens
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Xaa Asp Leu Trp Gly Ile Gln Arg Val Glu Asn Ala Arg Phe Leu Ser
Pro Glu Glu Asn Val Cys Asn Glu Met Leu Val Lys Ser Gln Phe Val
           20
                               25
Ala Cys Met Ala Thr Cys His Ser Leu Thr Lys Ile Glu Gly Val Leu
                            40
Ser Gly Asp Pro Leu Asp Leu Lys Met Phe Glu Ala Ile Gly Trp Ile
                       55
                                           60
   50
Leu Glu Glu Ala Thr Glu Glu Glu Thr Ala Leu His Asn Arg Ile Met
                                       75
                   70
Pro Thr Val Val Arg Pro Pro Lys Gln Leu Leu Pro Glu Ser Thr Pro
                                   90
               85
Ala Gly Asn Gln Glu Met Glu Leu Phe Glu Leu Pro Ala Thr Tyr Glu
           100
                               105
                                                   110
Ile Gly Ile Val Arg Gln Phe Pro Phe Ser Ser Ala Leu Gln Arg Met
       115
                           120
                                               125
Ser Val Val Ala Arg Val Leu Gly Asp Arg Lys Met Asp Ala Tyr Met
                                           140
   130
                       135
Lys Gly Ala Pro Glu Ala Ile Ala Gly Leu Cys Lys Pro Glu Thr Val
                   150
                                       155
Pro Val Asp Phe Gln Asn Val Leu Glu Asp Phe Thr Lys Gln Gly Phe
                                   170
              165
Arg Val Ile Ala Leu Ala His Arg Lys Leu Glu Ser Lys Leu Thr Trp
                              185
                                                   190
His Lys Val Gln Asn Ile Ser Arg Asp Ala Ile Glu Asn Asn Met Asp
                           200
                                               205
       195
Phe Met Gly Leu Ile Ile Met Gln Asn Lys Leu Lys Gln Glu Thr Pro
                       215
                                           220
Ala Val Leu Glu Asp Leu His Lys Ala Asn Ile Arg Thr Val Met Val
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225					230					235					240
Thr	Gly	Asp	Ser	Met	Leu	Thr	Ala	Val	Ser	Val	Ala	Arg	Asp	Cys	Gly
				245					250					255	
Met	Ile	Leu	Pro	Gln	Asp	Lys	Val	Ile	Ile	Ala	Glu	Ala	Leu	Pro	Pro
			260					265					270		
Lys	Asp	Gly	Lys	Val	Ala	Lys	Ile	Asn	Trp	His	Tyr	Ala	Asp	Ser	Leu
_	_	275					280					285			
Thr	Gln	Cys	Ser	His	Pro	Ser	Ala	Ile	Asp	Pro	Glu	Ala	Ile	Pro	Val
	290					295					300				
Lys	Leu	Val	His	Asp	Ser	Leu	Glu	Asp	Leu	Gln	Met	Thr	Arg	Tyr	His
305				_	310			-		315			_	-	320
Phe	Ala	Met	Asn	Gly	Lys	Ser	Phe	Ser	Val	Ile	Leu	Glu	His	Phe	Gln
				325	•				330					335	
Asp	Leu	Val	Pro	Lvs	Leu	Met	Leu	His	Gly	Thr	Val	Phe	Ala	Arq	Met
•			340	•				345	•				350	_	
Ala	Pro	Asp	Gln	Lvs	Thr	Gln	Leu	Ile	Glu	Ala	Leu	Gln	Asn	Val	Asp
		355		-1-			360					365			
Tvr	Phe		Glv	Met	Cvs	Glv	Asp	Gly	Ala	Asn	asp	Cvs	Gly	Ala	Leu
-1-	370		1		-,-	375		1			380	-1-	1		
Lvs		Ala	His	Glv	Glv		Ser	Leu	Ser	Glu		Glu	Ala	Ser	Val
385	5			1	390					395					400
	Ser	Pro	Phe	Thr		Lvs	Thr	Pro	Ser		Ser	Cvs	Val	Pro	
				405		-,-			410			-1		415	
Leu	Tle	Ara	Glu		Ara	Ala	Αla	Leu		Thr	Ser	Phe	Cvs		Phe
			420	- 1	5			425					430		
Lvs	Phe	Met		Len	Tvr	Ser	Tle	Ile	Gln	Tvr	Phe	Ser		Thr	Leu
-, -		435			-,-		440			-1-		445			
Len	Tvr		Tle	Leu	Ser	Asn		Gly	Asp	Phe	Gln		Leu	Phe	Ile
	450					455		1	•		460				
Asp		Ala	Tle	Tle	Leu		Val	Val	Phe	Thr		Ser	Leu	Asn	Pro
465					470					475				•	480
	Trp	Lvs	Glu	Leu		Ala	Gln	Arg	Pro		Ser	Glv	Leu	Ile	
		-,-		485					490			1		495	
Glv	Ala	Leu	Leu		Ser	Val	Len	Ser		Tle	Ile	Ile	Cvs		Glv
,			500					505					510		1
Phe	Gln	Ser		Glv	Phe	Phe	Trp	Val	Lvs	Gln	Gln	Pro		Tvr	Glu
		515		1			520		-,-			525		-1-	
Val	Trn		Pro	Lvs	Ser	Asp		Cys	Asn	Thr	Thr		Ser	Glv	Phe
	530			_,_		535		O, S			540	1		,	
Trp		Ser	Ser	His	Val		Asn	Glu	Thr	Glu		Asp	Glu	His	Asn
545					550					555					560
	Gln	Asn	Tvr	Glu		Thr	Thr	Val	Phe		Ile	Ser	Ser	Phe	
	·		- , -	565					570					575	
Tur	Len	Tle	Val		Tle	Δla	Phe	Ser	-	Glv	Lvs	Pro	Phe	-	G) n
-1-									270	_	-		590	5	
Pro	Cve	Tvr				Phe	Phe	Val				Tle		Len	Tvr
	4,2	595	_,_		-1-		600					605			-1-
۲۱e	Dhe		Len	Dha	110	Mot		Tyr	Dro	Val	Δla		Val	Asn	Gln
	610		u			615	u	- 1 -			620				
Va 1		Gln	Tle	Val	Cve		Pro	Tyr	Gln	Trn		٧a٦	Thr	Mer	Len
625			110	vu 1	630	- 44		* 1 "		635	9				640
	Tle	Val	t.en	Va 1		Δla	Phe	Val	Ser		Thr	٧a٦	Glu	Asn	
		• 4.1	u	645		a	~c	V 44 I	650					655	- ***
Dho	T.a.ı	Aen	Met		T.e.u	Trn	Lve	Val		Pho	Aen	Ara	Acn		Gln
- 110	سات	ىرىد.		* 44.1	يا ب	2	-13	A CT T	• • • •			5	p	-, 5	

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670
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Gly Glu Tyr Arg Phe Ser Thr Thr Gln Pro Pro Gln Glu Ser Val Asp
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Arg Trp Gly Lys
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<211> 373
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gegtaccate egatacaege cageettgae tgetgataca ceceagecae tgegeateag
180
tgatttcaat ggcggttaca cagtctggta tcggactgtc gatatcatcg taataggcga
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373
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                                                    30
           20
Glu Ile Thr Asp Ala Gln Trp Leu Gly Cys Ile Ser Ser Gln Gly Trp
                                                45
                           40
       35
Arg Val Ser Asp Gly Thr Leu Val Ala Pro Val Pro Pro Thr Phe Ala
                        55
                                            60
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                    70
Ala Cys Ala Ser Ala Ile Thr Ala Gly Phe Ser Cys Asp Ala
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                                    90
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<212> DNA
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aatatgcaag aagcatcgac tcagctggaa gactctctcc tggggaagat gctggagacg
tgtggagatg ctgagaatca gctggctctc gagctctccc agcacgaagt ctttgttgag
240
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cagaggaagc agcttgcaag attggtgtta gactgggatt cagtcagagc caggtggaac
caageteaca aateeteagg aaceaacttt caggggette cateaaaaat agataeteta
420
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gacatgtaca actttatggc caaagaaggg gagtatggca aattt
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Cys Phe Gln Gly Gln His Gly Thr Asp Ala Glu Arg Arg His Lys Lys
                                25
                                                    30
           20
Leu Pro Leu Thr Ala Leu Ala Gln Asn Met Gln Glu Ala Ser Thr Gln
                                               45
       35
                            40
Leu Glu Asp Ser Leu Leu Gly Lys Met Leu Glu Thr Cys Gly Asp Ala
                                            60
                       55
Glu Asn Gln Leu Ala Leu Glu Leu Ser Gln His Glu Val Phe Val Glu
                                        75
                   70
Lys Glu Ile Val Asp Pro Leu Tyr Gly Ile Ala Glu Val Glu Ile Pro
                                   90
Asn Ile Gln Lys Gln Arg Lys Gln Leu Ala Arg Leu Val Leu Asp Trp
                                                   110
                               105
           100
Asp Ser Val Arg Ala Arg Trp Asn Gln Ala His Lys Ser Ser Gly Thr
       115
                           120
                                               125
Asn Phe Gln Gly Leu Pro Ser Lys Ile Asp Thr Leu Lys Glu Gly Met
                                            140
  130
                       135
Asp Glu Ala Gly Asn Lys Val Glu Gln Cys Lys Asp Gln Leu Ala Ala
                   150
                                       155
Asp Met Tyr Asn Phe Met Ala Lys Glu Gly Glu Tyr Gly Lys Phe
                                    170
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<400> 1525
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ctgcgttctt ccctggacta tgaatatgaa ctgccgatgg cccagatgaa ccggcgttta
180
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<212> PRT
<213> Homo sapiens
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            20
Gly Val Asp Val Leu Val Lys Gly Leu Arg Ser Ser Leu Asp Tyr Glu
                            40
Tyr Glu Leu Pro Met Ala Gln Met Asn Arg Arg Leu Ser Gly Ile Asp
                                             60
    50
                        55
Thr Val Phe Leu Leu Thr Asp Glu Lys Tyr Gly Tyr Ile Ser Ser
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Arg Ile
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getteaagga atacgeegag atggeetgga agatteeega geattacaaa aacaaceget
120
acttcgccct ggtgcacggg gttggcatga ccggcgagta cccttgggtg gtgcaccgcg
aagacattga cgcgctgggt tacgacggtg tgttcgaggc cggcatgacc atctgtgtgg
240
aaagctacat cggccacgac gacggcggcg aaggcgtgaa gctcgaagaa cagatctaca
tccacgaaca cagcatcgag ttgctctccg attatccgtt cgacccacgc ctgttgccgc
360
gctgaacgcg t
371
<210> 1528
<211> 109
<212> PRT
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            20
                                25
Gln Gly Ser Pro Ser Val Gly Leu Ala Leu Cys Pro Ala Gln Gly Ser
Pro Ser Val Gly Leu Ala Leu Cys Pro Ala Gln Gly Ser Pro Ser Val.
                                            60
                        55
Gly Leu Ala Leu Cys Pro Ala Gln Gly Ser Pro Ser Val Gly Leu Ala
                                        75
Leu Cys Pro Ala Gln Gly Ser Pro Ser Val Gly Phe Ala Leu Cys Leu
                85
                                    90
Ala Gln Ala Ala Gln Gly Asn Gly Gly Thr Ser Arg Ala Gly Pro Ala
                                105
            100
Ala Pro Ser Thr Gln Pro Pro Ser Pro Ala Gly His Leu
        115
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acatteggea ageatgagga eggggageat egagacegeg acagetegge gaaggaattt
180
cggggtggca ggcatggcga aactagcttt ctgtgatcgg cgtgcgcggc cgggcaacaa
240
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tgcgcatggc caggtggttc aagtcggggc ggatcagtca taccgctgcg ctcagctccg
getttteace ggatteeage getggtgtgg teaceageaa cetgaegega ggattttage
accecetteg catacegeta tecagggeet ceaegacage ggeaecgatg acgategegt
teacegageg eggegtttte ggeagettee acatggggat cagaceatat tgatgeactg
gegatecett cataegegag cegeegatat ggeeecegag tgaggeeect cagttegege
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cgagag
726
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<212> PRT
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                                  10
1
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                                                 30
Gly Ser Ile Glu Thr Ala Thr Ala Arg Arg Arg Asn Phe Gly Val Ala
                           40
       35
Gly Met Ala Lys Leu Ala Phe Cys Asp Arg Arg Ala Arg Pro Gly Asn
Asn Arg Ala Ser Ser Gly Gly Leu Arg Ala Arg Leu Arg Leu Arg Ser
                   70
Arg His Leu Pro Ser Ala His Gly Gln Val Val Gln Val Gly Ala Asp
                                  90
               85
Gln Ser Tyr Arg Cys Ala Gln Leu Arg Leu Phe Thr Gly Phe Gln Arg
                                                 110
                             105
           100
Trp Cys Gly His Gln Gln Pro Asp Ala Arg Ile Leu Ala Pro Pro Ser
       115
                          120
His Thr Ala Ile Gln Gly Leu His Asp Ser Gly Thr Asp Asp Asp Arg
                                          140
   130
                      135
Val His Arg Ala Arg Arg Phe Arg Gln Leu Pro His Gly Asp Gln Thr
                 150
                                      155
Ile Leu Met His Trp Arg Ser Leu His Thr Arg Ala Ala Asp Met Ala
                                  170
              165
Pro Glu
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<212> DNA
<213> Homo sapiens
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gttaaaatge acgtcggctt gccgttgcag gcggtcggtc ttatcggcga agacagcgat
ggcgattaca ttatggcgat gctcgaccag taccacgtca atcgccagcg ggtacagcgc
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360
gcgt
364
<210> 1534
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<212> PRT
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Gly Trp Leu Ala Glu Ile Ile His Ser Glu Arg Ala Thr Gly Gly Ala
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Pro Leu Asn Val Leu Leu Thr Leu Val Lys Met His Val Gly Leu Pro
                           40
Leu Gln Ala Val Gly Leu Ile Gly Glu Asp Ser Asp Gly Asp Tyr Ile
                       55
Met Ala Met Leu Asp Gln Tyr His Val Asn Arg Gln Arg Val Gln Arg
                   70
                                       75
Thr Thr Phe Ala Pro Thr Ser Met Ser Gln Val Met Thr Asp Pro Thr
                                   90
               85
Gly Gln Arg Thr Phe Phe His Ser Pro Ala Ala Asn Arg Leu Leu Asp
                               105
           100
Leu Pro Ala Phe Asp Arg Leu Asp Ala
       115
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<212> DNA
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caatecetgg ggeeegggt gegtgeegge cageggeeag teetggeeeg gaatgateca
ctcqatatet teggeagaea aegeeageag aeegggeeta tegeegegge eeatggetge
aaaaaaactc ttcacagtct ggacattccc ttgtgtgctc atcgaaatct ctccatgtcc
tttacctggg atcgtgtccg atctcatcgg acgcgttgag gacctgctgg tgaggacggg
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360
actggccac
369
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<212> PRT
<213> Homo sapiens
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1
                5
                                    10
Arg Ser Ser Thr Arg Pro Met Arg Ser Asp Thr Ile Pro Gly Lys Gly
                                25
           20
His Gly Glu Ile Ser Met Ser Thr Gln Gly Asn Val Gln Thr Val Lys
                                                45
                            40
Ser Phe Phe Ala Ala Met Gly Arg Gly Asp Arg Pro Gly Leu Leu Ala
                                           60
                       55
Leu Ser Ala Glu Asp Ile Glu Trp Ile Ile Pro Gly Gln Asp Trp Pro
Leu Ala Gly Thr His Arg Gly Pro Gln Gly Lèu Ala Asp Leu Leu Gln
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85

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90
Lys Ala Cys Glu Met Glu Thr Ser Phe Pro Glu Pro Pro Glu Phe
                                105
            100
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<212> DNA
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120
cctcacgcgc cccggggaga tggtgggcca gctggccgtg ctcaccgagg agacctcgtc
ggcgtggtgg agacactgac ccaccaggcc cgggcgacca cggtgcatgc cgttcgggac
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<211> 98
<212> PRT .
<213> Homo sapiens
<400> 1538
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Pro Val Arg Val Leu Gly Ala Ala Ala Arg Val Pro Ala Glu Asp Arg
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Gln Pro Gly Gly His Leu Leu Val Pro His Ala Pro Arg Gly Asp Gly
        35
                            40
Gly Pro Ala Gly Arg Ala His Arg Gly Asp Leu Val Gly Val Val Glu
                        55
Thr Leu Thr His Gln Ala Arg Ala Thr Thr Val His Ala Val Arg Asp
                    70
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Ser Glu Leu Ala Lys Leu Pro Ala Gly Ala Leu Thr Ser Ile Lys Arg
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Arg Tyr
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gcctcagtgc cctgtcaccc acctagaacc tgttcacagc atgtcatccg ggctgctctg
geettgactg gacatgatta tttateetta cacacegtgg etgetetaca ggeeaagaaa
180
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caggotgete agecagggte aggagaaggt gggtcagget ccccggggac ctcaggccet
gacgcatcct ggcctcaccc taggcctcct ctgtcggggc agcctggctc agcagagccc
gggacacacg gctgaggcca cccaggctgg gccatcttgc ccctgttttg tgccccctac
360
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gaggageete agagaeeete eeetegaaag caetgggget tecaceteae aageggeagg
480
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660
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<213> Homo sapiens
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                                                    30
            20
                                25
Leu Ser Leu His Thr Val Ala Ala Leu Gln Ala Lys Lys Gln Ala Ala
        35
                            40
Gln Pro Gly Ser Gly Glu Gly Gly Ser Gly Ser Pro Gly Thr Ser Gly
                        55
                                            60
Pro Asp Ala Ser Trp Pro His Pro Arg Pro Pro Leu Ser Gly Gln Pro
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Gly Ser Ala Glu Pro Gly Thr His Gly
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<210> 1541
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<213> Homo sapiens
<400> 1541
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240
cagtgtgccg cgcctggcgc gacatagtgg acgggcccac tgggaggctg ctgcaactgg
ccegegaceg cagegegag ggeegageae tetacgeagt ggeteaacge tgcctgccca
360
acaacgaaga caaagaggag ttcccgctgt gcgccctggc gcgctactga ctgcgcgcc
cetteggeeg caateteate tteaacteet geggagagea gggetteaga ggetgggagg
tggagcatgg cgggaacggc tgggccatag aaaagaacct aacaccggtg cctggggctc
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1020
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1080
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1140
caagctaacc aggcgtccgc tacttcagaa gagtgtactg tcgcatgggg agtctgtaac
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1260
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cttaattgtt ttgttattca tttaatgact ttccctgctg ttacctaatt acaaattgga
tggaactgtg ttttttctg ctttgtttt tcagtttgct gtttctgtag ccatattgta
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1482
<210> 1542
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<213> Homo sapiens
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Cys Thr Val Ala Trp Gly Val Cys Asn His Ala Phe His Phe His Cys
                               25
                                                   30
           20
Ile Ser Arg Trp Leu Lys Thr Arg Gln Val Cys Pro Leu Asp Asn Arg
      35
                           40
Glu Trp Glu Phe Gln Lys Tyr Gly His
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<211> 311
<212> DNA
<213> Homo sapiens
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accaaagtcg gtgccgcgcc ttatgtttct cgaatggctc acgcgccgag gctacttgct
ccaeggeteg ageegageeg acetegtttg ttttgaacet egageaceca aagaetteag
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encenceene e
311
<210> 1544
<211> 96
<212> PRT
<213> Homo sapiens
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Met Arg Ser Trp Met Leu Thr Leu Pro Pro Ile Gly Trp Ser Gln Thr
                                    10
Asp Glu Gln Ala Phe Glu Val Ala Leu Asn Ala Gly Asp Ala Arg Lys
           20
                                25
Leu Pro Lys Ser Val Pro Arg Leu Met Phe Leu Glu Trp Leu Thr Arg
       35
                            40
Arg Gly Tyr Leu Leu His Gly Ser Ser Arg Ala Asp Leu Val Cys Phe
                                            60
   50
                       55
Glu Pro Arg Ala Pro Lys Asp Phe Ser Pro Asp Glu Phe Ser Lys Arg
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                                        75
Thr Ala Val Phe Ala Ser Ser Asp Gly Val Trp Pro Pro Xaa Xaa Xaa
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               85
<210> 1545
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<212> DNA
<213> Homo sapiens
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cgtctctgtc tcaagcacct cgcctgtttc caggttcaag gcctggatag tgcgagtgtc
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ac
362
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<212> PRT
<213> Homo sapiens
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Met Val Lys Ser Cys Glu Leu Ala His Leu Thr Asp Arg Leu Cys Leu
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Lys His Leu Ala Cys Phe Gln Val Gln Gly Leu Asp Ser Ala Ser Val
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                                25
            20
Val Leu Val Asp His Phe His Arg Val Val Trp Val Ala Pro Cys His
                            40
        35
Ser Leu Tyr Asp Leu Asn His Arg Cys Ile Trp His Val Pro Glu Leu
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Val Leu Leu Asn Asp Leu Ser Gly Val Val Glu Asn Leu His Ala Ile
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Val Arg Met Gly His Cys Gly Asp Val Pro Ser Arg
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<212> DNA
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cgcaaactcg gcctgccggc ctggcactgg aagaacgccg tgctcagtgc ctggatgtac
agcgtggtgt tgtggggggt gatgattgtc tggttgggcg cggcggtgat tccgttcctg
atcattcagg gtgtctacgg gttctcgttg ctggaagtgg tcaactacgt cgagcactac
gggcttaaac gccagaagtt gcccaacggt cgttatgaac ggtgttcgcc tcggcactcg
360
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tggaacagca accggattgt caccaatatc tttctgttcc aacttcagcg gcattccgac
420
caccatgcc
429
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<211> 143
<212> PRT
<213> Homo sapiens
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Arg Val Ala Thr Pro Glu Asp Pro Ala Ser Ser Arg Leu Gly Glu Ser
                                    10
1
Phe Trp Ala Phe Leu Pro Arg Ser Val Trp Phe Ser Ala Val Ser Ala
                                                    30
           20
                                25
Trp Asn Leu Glu Arg Glu Arg Leu Arg Lys Leu Gly Leu Pro Ala Trp
                            40
       35
His Trp Lys Asn Ala Val Leu Ser Ala Trp Met Tyr Ser Val Val Leu
                        55
                                            60
Trp Gly Val Met Ile Val Trp Leu Gly Ala Ala Val Ile Pro Phe Leu
                    70
Ile Ile Gln Gly Val Tyr Gly Phe Ser Leu Leu Glu Val Val Asn Tyr
Val Glu His Tyr Gly Leu Lys Arg Gln Lys Leu Pro Asn Gly Arg Tyr
                                105
                                                    110
           100
Glu Arg Cys Ser Pro Arg His Ser Trp Asn Ser Asn Arg Ile Val Thr
                                                125
                           120
       115
Asn Ile Phe Leu Phe Gln Leu Gln Arg His Ser Asp His His Ala
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<212> DNA
<213> Homo sapiens
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180
agaatccctg cactccacca ttcttgggca acactccctc taggattttg gtctcccttt
240
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<210> 1550
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<211> 139
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Ser Ser Trp Glu Thr Pro Gly Lys Phe Ala Val Ala Pro Pro Thr Arg
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            20
Gln Leu Gly Glu Trp Lys Lys Pro Met Leu Ala Gly Leu Asp Gly Gly
                            40
Val Cys Trp Val Ala Val Val Lys Asp Gln Arg Glu Lys Gly Asp Gln
                       55
   50
Asn Pro Arg Gly Ser Val Ala Gln Glu Trp Trp Ser Ala Gly Ile Leu
                                        75
                   70
Pro His Leu Pro Ala Asp Arg Pro Gly Cys Gln Ser Cys Met Gly Ala
                                    90
               85
Gly Arg Lys Thr Gln Tyr Pro Trp Ser Gln Arg Gly Lys Thr Thr Thr
            100
                                105
                                                    110
Gly Asn Gly Arg Arg Trp Cys Ala Gln Thr His Val Ala Pro Gln Arg
                           120
       115
Val His Tyr Lys Thr Glu Pro Trp Ser Leu Ser
   130
                       135
<210> 1551
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<212> DNA
<213> Homo sapiens
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gaggagcaaa cgcagetcac etettttet gtccaetget teagggeeta eccetgtget
ttggagatgg aacaaaagtg agagagetee etgacacace eteccaggge gaggatggca
geteetteet ecattiggte ctaacacage eteeccagga gaccagggge atecennnne
cccnnc
306
<210> 1552
<211> 101
<212> PRT
<213> Homo sapiens
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Met Asp Thr Pro Pro Leu Ala Leu Asn Met Thr Trp Leu Pro His Thr
                                                        15
1
Arg Lys Pro Gln Arg Ser Ser Gln Leu Ala Lys His Pro Cys Pro Cys
           20
                                25
Pro Ala Gly Ser Thr Lys Ala Gly Gly Ala Asn Ala Ala His Leu Phe
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40
Phe Cys Pro Leu Leu Gln Gly Leu Pro Leu Cys Phe Gly Asp Gly Thr
                        55
                                            60
   50
Lys Val Arg Glu Leu Pro Asp Thr Pro Ser Gln Gly Glu Asp Gly Ser
                                        75
                    70
Ser Phe Leu His Leu Val Leu Thr Gln Pro Pro Gln Glu Thr Arg Gly
                                    90
Ile Pro Xaa Pro Xaa
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<212> DNA
<213> Homo sapiens
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aaggccaagg agatcateee caaggeegae etgeeeagee eeeggaagga gttcagegee
180
tcagcgatcg gctgcaaggt ctatgtgacg gggggcaggg gctccgagaa cggggtctcc
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420
aaatacgacc ctggggccaa caagtggatg atggtggccc ccttgcggga tggcgtcagc
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cgggacatgg tgtccaaggt ccagtgetat gaccectcgg agaacaggtg gacgatcaag
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<210> 1554
<211> 219
<212> PRT
<213> Homo sapiens
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Ile Leu Gln Asn Asp Gly Val Val Thr Ser Pro Tyr Ser Arg Pro Arg
                                    10
1
Lys Ala Gly His Thr Leu Leu Ile Leu Gly Gly Gln Thr Phe Met Cys
                                25
Asp Lys Ile Tyr Gln Val Asp His Lys Ala Lys Glu Ile Ile Pro Lys
                            40
Ala Asp Leu Pro Ser Pro Arg Lys Glu Phe Ser Ala Ser Ala Ile Gly
                        55
Cys Lys Val Tyr Val Thr Gly Gly Arg Gly Ser Glu Asn Gly Val Ser
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70
Lys Asp Val Trp Val Tyr Asp Thr Val His Glu Glu Trp Ser Lys Ala
                                  90
               85
Ala Pro Met Leu Ile Ala Arg Phe Gly His Gly Ser Ala Glu Leu Glu
                               105
                                                  110
           100
Asn Cys Leu Tyr Val Val Gly Gly His Thr Ser Leu Ala Gly Val Phe
                                              125
                          120
Pro Ala Ser Pro Ser Val Ser Leu Lys Gln Val Glu Lys Tyr Asp Pro
                      135
                                          140
Gly Ala Asn Lys Trp Met Met Val Ala Pro Leu Arg Asp Gly Val Ser
                  150
                             155
Asn Ala Ala Val Val Ser Ala Lys Leu Lys Leu Phe Val Phe Gly Gly
             165
                                  170
Thr Ser Ile His Arg Asp Met Val Ser Lys Val Gln Cys Tyr Asp Pro
                                                 190
                               185
Ser Glu Asn Arg Trp Thr Ile Lys Ala Glu Cys Pro Gln Pro Trp Arg
                          200
Tyr Thr Ala Ala Ala Val Leu Gly Ser Gln Ile
                       215
<210> 1555
<211> 328
<212> DNA
<213> Homo sapiens
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gtgagccacc ggtttgtgat ttgaaactga gtgagagtgc tgtggagcgc gaaatatgtg
tgtgtgtaga gtggaggtga gcgaatttgt gtgcatgtga gacggacgca atggcagagt
gtagcatcct gtgttgggat tgggattn
328
<210> 1556
<211> 102
<212> PRT
<213> Homo sapiens
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Met Leu His Ser Ala Ile Ala Ser Val Ser His Ala His Lys Phe Ala
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His Leu His Ser Thr His Thr His Ile Ser Arg Ser Thr Ala Leu Ser
           20
                               25
Leu Ser Phe Lys Ser Gln Thr Gly Gly Ser Pro Pro Arg Pro Thr Leu
      35
Ala Asp Phe Gln Thr Ser Arg Gly Thr Leu Asp His Pro Tyr Arg Ile
                    55
Thr His Val Leu His Pro Leu His Asn Thr Arg Ser Pro Gln Gly Arg
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75
                   70
65
Leu Leu Gln Asn His Ala His Leu Gln Thr Pro Glu Ala Glu Ser Ser
                                   90
               85
Leu Pro Ser Ser His Ala
           100
<210> 1557
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<212> DNA
<213> Homo sapiens
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togcattttt oggatcaggt caaattotgt gotoggoatt gacaggaaat tgacgtgtat
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gaccatgccg caccatgtgg atcgtctacc gttttggcct tgccgccatt gccttgatcg
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gaagetegat gggeageagg egeatgagga acceggegee attgaategt gaggegetgg
cggagcgcgg cccgttcaaa tgcgacgcgt
390
<210> 1558
<211> 114
<212> PRT
<213> Homo sapiens
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Met Ala Pro Gly Ser Ser Cys Ala Cys Cys Pro Ser Ser Phe Ala Ser
1
                5
                                   10
Gly Ala Pro Ala Trp Pro Ile Ala Gly Thr Gly Thr Arg Thr Ala Gln
           20
                               25
Ser Gly Arg Ser Arg Gln Trp Arg Gln Gly Gln Asn Gly Arg Arg Ser
                            40
Thr Trp Cys Gly Met Val Val Val Leu Leu Ser Ala Tyr Ser Ala
                                           60
                       55
Cys Arg Pro Asp Thr Ala Lys Asn Arg Leu Ile His Val Asn Phe Leu
                                       75
Ser Met Pro Ser Thr Glu Phe Asp Leu Ile Arg Lys Met Arg Glu Ser
                                   90
               85
Gly Ala Asp Pro Arg Arg Lys Pro Leu Asn Gly Pro Leu Glu Lys Ser
                               105
                                                   110
Val His
<210> 1559
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<212> DNA
<213> Homo sapiens
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gagtgcaccc ttgacctctt caacgccggg gtagttgagg ccttgcagga tttcggtgcc
gccggaatct cctgtgccac ctccgagctg gccagtgctg gcgacggtgg catgcacgtc
gagetegace gegtteeget gegegaeeeg aacetegeee etgaagagat ceteatgage
gagtcccagg ageggatggc cgcggtggtg cgccccgatc agettgaccg ettcatggag
360
atctgcgccc attggggtgt cgctgccact gtcattggcg aggtcaccga caccggtcga
cttcacattg attggcaggg cgagcggatt gtcgacgtcg atccgcggac ggttgctcac
gacggaccgg ttctcgacat gccggccgcc cgtccgtggt ggattgatga gctcaacgag
aacgacgcta acgcgt
556
<210> 1560
<211> 185
<212> PRT
<213> Homo sapiens
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                                   10
                                                       15
Phe Ala Ala Glu Gly Glu Ser Lys Arg Pro Ser Val Gln Val Gly Asp
                               25
           20
Pro Phe Met Glu Lys Leu Leu Ile Glu Cys Thr Leu Asp Leu Phe Asn
                           40
                                               45
Ala Gly Val Val Glu Ala Leu Gln Asp Phe Gly Ala Ala Gly Ile Ser
   50
                       55
Cys Ala Thr Ser Glu Leu Ala Ser Ala Gly Asp Gly Gly Met His Val
                                       75
                   70
Glu Leu Asp Arg Val Pro Leu Arg Asp Pro Asn Leu Ala Pro Glu Glu
               85
                                   90
Ile Leu Met Ser Glu Ser Gln Glu Arg Met Ala Ala Val Val Arg Pro
                              105
                                                   110
           100
Asp Gln Leu Asp Arg Phe Met Glu Ile Cys Ala His Trp Gly Val Ala
       115
                           120
                                               125
Ala Thr Val Ile Gly Glu Val Thr Asp Thr Gly Arg Leu His Ile Asp
                                           140
   130
                       135
Trp Gln Gly Glu Arg Ile Val Asp Val Asp Pro Arg Thr Val Ala His
                                       155
                   150
Asp Gly Pro Val Leu Asp Met Pro Ala Ala Arg Pro Trp Trp Ile Asp
                                  170
               165
Glu Leu Asn Glu Asn Asp Ala Asn Ala
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                               185
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<210> 1561
<211> 466
 <212> DNA
<213> Homo sapiens
<400> 1561
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120
ggacacttaa aactctcact tgaaattggg cacaggtttg atgtagagat aaggacgggg
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cgttgcttta aattcccaat gtgttgtttc gttactacta atttaatacc gtaagctcta
360
ggtaaagttc catgttgttg aactctgact gttctctttg gaattgaacg ttttgcatcc
tcctcctgtg gctttaggtc tgacattgta tttgaccttt actagt
466
<210> 1562
<211> 130
<212> PRT
<213> Homo sapiens
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Met Ser Asp Leu Lys Pro Gln Glu Glu Asp Ala Lys Arg Ser Ile Pro
                                    10
Lys Arg Thr Val Arg Val Gln Gln His Gly Thr Leu Pro Arg Ala Tyr
            20
                                2.5
Gly Ile Lys Leu Val Val Thr Lys Gln His Ile Gly Asn Leu Lys Gln
Arg Leu Val Val Pro Ser Asn Ile Tyr Ile Lys Ser Ile Lys Glu Ala
                       55
   50
                                            60
Phe Glu Tyr His Leu Thr Ala Leu Trp Pro Tyr Arg Ser Asp Glu Ser
                    70
                                        75
Met Thr Lys Trp Val Ser Ile Pro His Pro Val Leu Ile Ser Thr Ser
                85
                                    90
                                                        95
Asn Leu Cys Pro Ile Ser Ser Glu Ser Phe Lys Cys Pro His Phe Leu
           100
                                105
                                                    110
Ser His Ile Gln Gly Asn His Ile Asn Ser Glu Cys Cys Leu His Leu
                            120
                                                125
Gly Met
   130
<210> 1563
<211> 434
<212> DNA
<213> Homo sapiens
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120
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240
ccgacggttg cgctgcaagc caacagcctg gcgatcgtta cgctgagcct gggctgcatt
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434
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<212> PRT
<213> Homo sapiens
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Leu Gly Gly Val Phe Gly Leu Leu Ser Val Tyr Leu Pro Arg Trp Leu
                                    10
His Glu Thr Pro Ile Phe Ala Glu Met Gln Gln Arg Lys Thr Leu Ala
            20
                                25
                                                     30
Ala Glu Leu Pro Leu Arg Ala Val Leu Arg Asp His Arg Gly Ala Ile
        35
                            40
Val Leu Ser Met Leu Leu Thr Trp Leu Leu Ser Ala Gly Val Val Val
   50
                        55
                                            60
Val Ile Leu Met Thr Pro Thr Val Leu Gln Thr Val Tyr His Phe Ser
                    70
                                        75
Pro Thr Val Ala Leu Gln Ala Asn Ser Leu Ala Ile Val Thr Leu Ser
                85
                                    90
Leu Gly Cys Ile Ala Ser Gly Ala Leu Ala Asp Arg Phe Gly Ala Gly
            100
                                105
                                                    110
Arg Val Leu Val Thr Gly Trp Arg Cys Cys Trp Pro Leu Pro Gly Arg
                                                125
        115
                            120
Cys Ile Thr Ala
   130
<210> 1565
<211> 373
<212> DNA
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ctgcattcgg ccatttcttc ccaagaatca ccataaaggt tgtcaaaatc aaggaccctg
180
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atccggtgat tctcgaagtc atcgatgagc agaacaagtt tacccccgag ggagaaaagc
gggtggtgct cttgatgctc gacaacctct accgtcccag tacccaccgt gcattggcga
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acgggggcgt cccttatctg cggtcgaaga gtgtcactgt tgacctcgta gacagccggg
360
acaacacggg tac
373
<210> 1566
<211> 106
<212> PRT
<213> Homo sapiens
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                                    10
1
                5
Ile Lys Arg Thr Arg Glu Pro Ala Phe Gly His Phe Phe Pro Arg Ile
                                                    30
                                25
Thr Ile Lys Val Val Lys Ile Lys Asp Pro Asp Pro Val Ile Leu Glu
                            40
       35
Val Ile Asp Glu Gln Asn Lys Phe Thr Pro Glu Gly Glu Lys Arg Val
                                           60
Val Leu Leu Met Leu Asp Asn Leu Tyr Arg Pro Ser Thr His Arg Ala
                                        75
                                                             80
Leu Ala Asn Gly Gly Val Pro Tyr Leu Arg Ser Lys Ser Val Thr Val
                                    90
                85
Asp Leu Val Asp Ser Arg Asp Asn Thr Gly
            100
<210> 1567
<211> 917
<212> DNA
<213> Homo sapiens
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180
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540
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attogtgoca cagoggggac otoggagota tgoottgata aggcaagtga ggttacatgt
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660
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gacagcagta cgaatcgtgg ctctcctgag gcctgggttt cctcatatgt aaaatggggg
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917
<210> 1568
<211> 113
<212> PRT
<213> Homo sapiens
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Met Gly Pro Ala Leu Pro His Val Phe Glu Ser Gln His Leu Ser Pro
                                    10
Leu Leu Cys Ile Cys Gly Ser Gln His Cys Leu Pro Pro Tyr Pro Asp
                                25
            20
Ser Phe Arg Arg Leu Gly Gly Gln Pro Gly His Phe Cys Arg Asp Pro
                            40
                                                45
Arg Leu Ser Arg Cys Pro Glu Ser Trp Gly Gly Leu Glu Gly Arg Gly
    50
                        55
Pro Ala Ala Glu Ala Val Ser Arg Val Pro Ala Glu Gly Ala Ala Cys
                    70
                                        75
Cys Ser Val Trp Ala Ser Pro Leu Pro Ser Gln Pro Gly Phe Arg Leu
                                    90
Ile Leu Leu Glu Ala Ser Asn Trp Val Pro Gln Glu Cys Ser Gly Phe
            100
                                105
Pro
<210> 1569
<211> 379
<212> DNA
<213> Homo sapiens
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Asp Gly Thr Gln Gln Glu Gly Ala Val Ala Ser Thr Glu Leu Leu Lys
                            40
                                                45
Asp Gly Lys Arg Glu Thr Thr Val Ser Gln Leu Leu Ile Asn Pro Thr
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                        55
Asp Leu Asp Ile Gly Arg Val Phe Thr Cys Arg Ser Met Asn Glu Ala
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                                        75
Ile Pro Ser Gly Lys Glu Thr Ser Ile Glu Leu Asp Val His His Pro
                                    90
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Pro Thr Val Thr Leu Ser Ile Glu Pro Gln Thr Val Gln Glu Gly Glu
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Arg Val Val Phe Thr Cys Gln Ala Thr Ala Asn Pro Glu Ile
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gatgcgttcg gcatgtcgac cgaatgggtc ggattggaca acttccgcaa cctgctggat
180
gaccccacct acctgaattc cttccagcgc accgccgtgt tctcggtgct ggtggcaggg
gtcgggatcg ccgtgtcact gggtctggcg atctttgccg accccatcac tccgtcgcca
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Val Leu Gln Ser Phe Gln Met Glu Asp Ala Phe Gly Met Ser Thr Glu
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Trp Val Gly Leu Asp Asn Phe Arg Asn Leu Leu Asp Asp Pro Thr Tyr
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Leu Asn Ser Phe Gln Arg Thr Ala Val Phe Ser Val Leu Val Ala Gly
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Val Gly Ile Ala Val Ser Leu Gly Leu Ala Ile Phe Ala Asp Pro Ile
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               85
Thr Pro Ser Pro Cys Val Gln Asp Thr Leu Leu Ile Val Pro Tyr Ala
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           100
Val Ala Pro Met Ile Ala Gly
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                                25
Leu Ala Ile Phe Gly Ile Gly Tyr Asn Thr Arg Trp Lys Glu Asp Ile
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Arg Tyr His Tyr Ala Glu Ile Ser Ser Gln Val Pro Leu Gly Lys Arg
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Thr Arg Val Gln Lys Met Asn Trp Lys Asn Val Tyr Tyr Lys Phe
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240
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gatgtcgtca acgccagccc gtggccggtg tgcgtcatcg gtggggtgag cgcatccgat
360
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Val Gly Gln Ser Asp Met Pro Val Asp Gln Ala Arg Ala Ile Leu Gly
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        35
Asp Asp Leu Leu Ile Gly Leu Ser Ala Gln Thr Pro Ala His Val Glu
                                            60
                        55
Ala Ala Leu Ser Gln Gly Arg Asp Ile Val Asp Tyr Leu Gly Val Gly
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                                        75
Ala Leu His Gly Thr Gly Thr Lys Pro Glu Ala Gly Glu Leu Gly Leu
                                    90
                85
Ala Glu Ile Arg Asp Val Val Asn Ala Ser Pro Trp Pro Val Cys Val
                                105
                                                    110
            100
Ile Gly Gly Val Ser Ala Ser Asp Ala Gln Asp Val Ala Arg Val Gly
                                                125
        115
                            120
Cys Asp Gly Leu Ser Val Val Ser Ala Ile Cys Arg Ser Thr Asp Pro
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Lys Ser Ser Ala Arg Glu Leu Ala Glu Ala Trp Arg Thr
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180
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Pro Gly Val Ala His Ala Arg Thr Leu Arg Val Ala Gly Ala Gly Phe
                            40
                                                45
Pro Ala Arg Gly Gln Arg Ala Ala Gly Asp Leu Val Ile Glu Leu Glu
                        55
   50
Pro Met Leu Pro Gln Ala Pro Asp Lys Gln Leu His Ala Leu Ile Glu
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Gln Leu Asp Val Ala Leu Gly Lys Ser Ala Thr Arg His Phe Pro
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120
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gacccgctac aggecetgee geceteggee geceecaegg ggeegetget egeceeteeg
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gatcaggcgc ccgagggccg gggctggagg agactggcgg agctggcggg gagtcgcggg
360
cgcctccgcc tcagttgcct agacctggag cagtgttctc ttaaggtact ggagcctgaa
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480
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720			atttttaatg		
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	atgagaccaa	aaagctatac	atggtgcctt	atgcggattt	ggaacaccaa
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1200			caccccaage		
1260					
1320			ctggacttca		
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	tggatgaagt	tgcagaagat	atgggtaagt	gtcaccttac	caaaggcaaa
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1860 qqaacagaat	attetgetga	atctcttgtg	cggaatctac	agtgggccaa	ggeteatgaa
1920			tgtggtgttc		
1980					
2040			acaagtatag		
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cattgcctct ataccagact cagttcactg caaaaattaa aggaacatct agtcttcaca
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aatgttggga aacctctcat tgctaaatta gacatgcatc gaggtttggg aaggaagact
2340
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cctccttgtt tttgaaagtt agcataattt tagatgcctg tgaaatagta ctgcacttac
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                                25
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Pro Glu Gly Arg Gly Trp Arg Arg Leu Ala Glu Leu Ala Gly Ser Arg
                                            60
   50
                        55
Gly Arg Leu Arg Leu Ser Cys Leu Asp Leu Glu Gln Cys Ser Leu Lys
                                        75
Val Leu Glu Pro Glu Gly Ser Pro Ser Leu Cys Leu Leu Lys Leu Met
                                    90
                85
Gly Glu Lys Gly Cys Thr Val Thr Glu Leu Ser Asp Phe Leu Gln Ala
                                105
                                                    110
Met Glu His Thr Glu Val Leu Gln Leu Leu Ser Pro Pro Gly Ile Lys
                                                125
       115
                            120
Ile Thr Val Asn Pro Glu Ser Lys Ala Val Leu Ala Gly Gln Phe Val
                                            140
Lys Leu Cys Cys Arg Ala Thr Gly His Pro Phe Val Gln Tyr Gln Trp
                                        155
                    150
Phe Lys Met Asn Lys Glu Ile Pro Asn Gly Asn Thr Ser Glu Leu Ile
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Phe	Asn	Ala	Val		Val	Lys	Asp	Ala	_	Phe	Tyr	Val	Cys		Val
			180					185					190		
Asn	Asn		Phe	Thr	Phe	Glu		Ser	Gln	Trp	Ser	Gln	Leu	Asp	Val
_	_	195	_			D1	200			11-1		205	170 1	C	01. .
Cys	ASP 210	iie	Pro	GIU	ser	215	GIN	Arg	Ser	vai	220	Gly	vai	Sei	GIU
Ser		t.en	Gln	Tle	Cvs		Glu	PTO	Thr	Ser		Lys	Leu	Met	Pro
225	27.5	Deu			230					235		-,-			240
	Ser	Thr	Leu	Val	Leu	Gln	Суз	Val	Ala	Val	Gly	Ser	Pro	Ile	Pro
_				245			_		250					255	
His	Tyr	Gln	Trp	Phe	Lys	Asn	Glu		Pro	Leu	Thr	His		Thr	Lys
		_	260		_	_		265	_				270	-	
Lys	Leu		Met	Val	Pro	Tyr		Asp	Leu	GIu	His	Gln 285	GIY	Thr	Tyr
Trn	Cvs	275	Val	Tvr	Δen	Asn	280	Asn	Ser	Gln	Asn	Ser	Lvs	Lvs	Val
115	290		V41	- 7 -	A.J.I.	295	9	пор	501	01	300		-,-	-,0	
Glu		Ile	Ile	Gly	Arg	Thr	Asp	Glu	Ala	Val	Glu	Cys	Thr	Glu	Asp
305				_	310		_			315					320
Glu	Leu	Asn	Asn	Leu	Gly	His	Pro	Asp	Asn	Lys	Glu	Gln	Thr		Asp
	_		- -	325	_	_		_ •	330	_				335	_
Gln	Pro	Leu		Lys	Asp	Lys	Val		Leu	Leu	He	Gly	350	Met	Asn
Tree	7~~	Glu	340	Dro	Luc	T.eu	Luc	345	Pro	T.e.ii	Va 1	Asp		Tyr	Glo
171	ura	355	1113	110	LyJ		360	n_u	110	Deu		365		-,-	0_0
Leu	Thr		Leu	Leu	Arg	Gln		Asp	Phe	Lys	Val	Val	Ser	Leu	Leu
	370					375					380				
Asp	Leu	Thr	Glu	Tyr	Glu	Met	Arg	Asn	Ala		Asp	Glu	Phe	Leu	
385					390				_	395	_				400
Leu	Leu	Asp	Lys		Val	Tyr	Gly	Leu		Tyr	Tyr	Ala	Gly	H15	GIY
Tur	Glu	Asn	Phe	405 Glv	Asn	Ser	Phe	Met	410 Val	Pro	Val	Asp	Ala		Asn
	014	*10**	420	011		-		425	• • • •				430		
Pro	Tyr	Arg	Ser	Glu	Asn	Cys	Leu	Cys	Val	Gln	Asn	Ile	Leu	Lys	Leu
		435					440					445			
Met		Glu	Lys	Glu	Thr		Leu	Asn	Val	Phe		Leu	Asp	Met	Cys
3	450	3	3		T	455	3	Th.	T 1.0	D=-	460	Low	ħ an	717	T OU
465	ьys	Arg	ASII	АБР	470	Asp	ASD	1111	116	475	116	Leu	Asp	AIG	480
	Val	Thr	Ala	Asn		Val	Phe	Gly	Tyr		Thr	Cys	Gln	Gly	
•				485				•	490			•		495	
Glu	Ala	Phe	Glu	Ile	Gln	His	Ser	Gly	Leu	Ala	Asn	Gly	Ile	Phe	Met
			500					505				_	510	_	
Lys	Phe		Lys	Asp	Arg	Leu		Glu	Asp	Lys	Lys	Ile	Thr	Val	Leu
Lou	n an	515	17-3	717	C1	7.00	520	Clv	tura	Cvc	uic	525	Thr	Lve	Gly
Leu	530	GIU	vai	Ala	GIU	535	Mec	GIÅ	Lys	cys	540	Leu	1111	Lys	GIY
Lys		Ala	Leu	Glu	Ile		Ser	Ser	Leu	Ser		Lys	Arg	Ala	Leu
545					550	,				555		-	-		560
Thr	Asp	Pro	Ile		Gly	Thr	Glu	Tyr	Ser	Ala	Glu	Ser	Leu	Val	Arg
				565		_			570			_		575	
Asn	Leu	Gln	-	Ala	Lys	Ala	His		Leu	Pro	Glu	Ser		Cys	Leu
Luc	Dha	λ c ~	580 Cve	Glv	Va I	G1 n	TÌA	585	Len	G1	Dhe	Ala	590 ala	Glu	Dhe
د ړ ـ	* "1E	vaħ	~y3	~ _ y	·ul			~~11	Lu	o-y					

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600
Ser Asn Val Met Ile Ile Tyr Thr Ser Ile Val Tyr Lys Pro Pro Glu
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                      615
Ile Ile Met Cys Asp Ala Tyr Val Thr Asp Phe Pro Leu Asp Leu Asp
                  630
                                      635
Ile Asp Pro Lys Asp Ala Asn Lys Gly Thr Pro Glu Glu Thr Gly Ser
                                 650
              645
Tyr Leu Val Ser Lys Asp Leu Pro Lys His Cys Leu Tyr Thr Arg Leu
                                                 670
                            665
           660
Ser Ser Leu Gln Lys Leu Lys Glu His Leu Val Phe Thr Val Cys Leu
                                            685
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Ser Tyr Gln Tyr Ser Gly Leu Glu Asp Thr Val Glu Asp Lys Gln Glu
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Val Asn Val Gly Lys Pro Leu Ile Ala Lys Leu Asp Met His Arg Gly
                   710
                                      715
Leu Gly Arg Lys Thr Cys Phe Gln Thr Cys Leu Met Ser Asn Gly Pro
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                                                      735
               725
Tyr Gln Ser Ser Ala Ala Thr Ser Gly Gly Ala Gly His Tyr His Ser
                                                  750
                               745
          740
Leu Gln Asp Pro Phe His Gly Val Tyr His Ser His Pro Gly Asn Pro
                          760
Ser Asn Val Thr Pro Ala Asp Ser Cys His Cys Ser Arg Thr Pro Asp
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Ala Phe Ile Ser Ser Phe Ala His His Ala Ser Cys His Phe Ser Arg
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His Thr Tyr His Arg Val Pro Glu Val Ala Asp Ala Trp Leu Asp Ser
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Gly Ser Met Pro Phe Ala Gln Trp Gly Tyr Pro His Val Pro Gly Ser
                            40
Lys Glu Lys Phe Glu Ser His Tyr Pro Gly Asp Phe Ile Cys Glu Ala
                        55
    50
Ile Asp Gln Thr Arg Gly Trp Phe Tyr Thr Met Met Ala Val Gly Thr
                                        75
                    70
Leu Val Phe Asp Glu Ser Ser Tyr Arg Asn Val Leu Cys Leu Gly His
                                    90
                85
Ile Leu Ala Glu Asp Gly Arg Lys Met Ser Lys His Leu Gly Asn Ile
            100
                                105
Leu Leu Pro Ile Pro Leu Met Asp Ser His Gly Ala Asp Ala Leu Arg
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Trp Phe Met Ala Ala Asp Gly Ser Pro Trp Ser Ala Arg Arg
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Lys Ala Gly Phe Arg Asp Gly Leu Gly Ser Ser Gly Glu Met Gly Ser
                        55
Met Asp Glu Ala Asp Tyr Arg Lys Asp Leu Gly Ala Pro Glu Glu Met
                                       75
                   70
Gly Ser Gly Ser Tyr Thr Asp Tyr Arg Asn Gly Leu Gly Ser Ser Gly
                                   90
               85
Lys Ile Ser Ser Gly Asp Glu Ala Gly Tyr Lys Asn Val Leu Gly Gly
                                                    110
                                105
           100
Ser Gly Arg Asn Pro Leu Gly Ser Glu Ala Gly Ser Arg Gly Ser Leu
                            120
       115
Glu Asp Ser Gly Tyr Ile Leu Ser Trp Asn Glu Ala Gly Ser Arg Gln
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Gly Phe Gly Gly Thr Ser
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145
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ggcagctgca gggcaagctg gggaggaagc gcagggtgtt gcacaggttg catcataatg
180
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<210> 1586
<211> 139
<212> PRT
<213> Homo sapiens
<400> 1586
Met Glu Gly Lys Ser Gly Arg Ser Arg Glu Thr Gly Leu Ser Gln Lys
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10
Val Ile Lys His Trp Phe Arg Asn Thr Leu Phe Lys Glu Arg Gln Arg
                               25
           20
Asn Lys Asp Ser Pro Tyr Asn Phe Ser Asn Pro Pro Ile Thr Val Leu
                            40
Glu Asp Ile Arg Ile Asp Pro Gln Pro Thr Ser Leu Glu His Tyr Lys
                                           60
                       55
Ser Asp Ala Ser Phe Ser Lys Arg Ser Ser Arg Thr Arg Phe Thr Asp
                                       75
                   70
Tyr Gln Leu Arg Val Leu Gln Asp Phe Phe Asp Thr Asn Ala Tyr Pro
                                  90
               85
Lys Asp Asp Glu Ile Glu Gln Leu Ser Thr Val Leu Asn Leu Pro Thr
                               105
           100
Arg Val Ile Val Val Trp Phe Gln Asn Ala Arg Gln Lys Ala Arg Lys
       115
                           120
Ser Tyr Glu Asn Gln Ala Glu Thr Pro Ser Arg
                        135
    130
<210> 1587
<211> 501
<212> DNA
<213> Homo sapiens
<400> 1587
tgtacacaca gtgatttggg gtcctttttc ctaaaacagc ttctttatca ggactttgga
attctgggtg agatagaaac actgaaaaca gggcggaagt tttttcttct ggcttcttag
tccacggagg gctcagcgtg gagaggatat gccgtggcat tctccctggg agaccacaca
tgttcccgac agctcagacc ccagaccgca tgtgctcctg acagctcaga ccccagaccg
cgcgtgctcc tgacagctca gaccccagac cgcaggtgct cccgacagct cagaccccag
accgcgggtg ctcctgacag ctcagacccc agaccgcgcg tgctcccgac agctcagacc
ccagaccgcg ggtgctcctg acagctcaga ccccagaccg cgcgtgctcc cgacagctca
gaccccagac cgcgggtgct cctgacagct cagaccccag accgcgggtg ctcctgacag
ctcagacccc agaccacgcg t
501
<210> 1588
<211> 86
<212> PRT
<213> Homo sapiens
<400> 1588
Ser Thr Glu Gly Ser Ala Trp Arg Gly Tyr Ala Val Ala Phe Ser Leu
                                    10
Gly Asp His Thr Cys Ser Arg Gln Leu Arg Pro Gln Thr Ala Cys Ala
                                25
            20
Pro Asp Ser Ser Asp Pro Arg Pro Arg Val Leu Leu Thr Ala Gln Thr
```

```
40
Pro Asp Arg Arg Cys Ser Arg Gln Leu Arg Pro Gln Thr Ala Gly Ala
                       55
                                            60
Pro Asp Ser Ser Asp Pro Arg Pro Arg Val Leu Pro Thr Ala Gln Thr
                   70
Pro Asp Arg Gly Cys Ser
<210> 1589
<211> 407
<212> DNA
<213> Homo sapiens
<400> 1589
aagettgetg gggacaceet ttttaegggg cetegtgggg gaggagttae etgeattgae
tccaccggtt ccactaacgc cgacatggct gctttcgtgc gagcaggggg aacgtctttc
tgcctactcg ttgctgacca ccaagaggc gggcgtggac ggttcacgcg cagttggcag
gatgtccccg gtacgagttt ggcgatctca gcgttggtgc ccaatgatcg tccgtcgcag
gactggggct ggctgtcgat ggttgcgggg ctcgctgttg tcaaggtcat caaggaggtc
ggtggggctg accgttcccg agtgacgctg aagtggccca atgatgtgct cgtggatctg
gacactgacc agggcggcaa agtgtgcgga attctctcag aacgcgt
<210> 1590
<211> 135
<212> PRT
<213> Homo sapiens
<400> 1590
Lys Leu Ala Gly Asp Thr Leu Phe Thr Gly Pro Arg Gly Gly Val
Thr Cys Ile Asp Ser Thr Gly Ser Thr Asn Ala Asp Met Ala Ala Phe
            20
                                25
Val Arg Ala Gly Gly Thr Ser Phe Cys Leu Leu Val Ala Asp His Gln
                                                45
        35
                            40
Glu Gly Gly Arg Gly Arg Phe Thr Arg Ser Trp Gln Asp Val Pro Gly
                                            60
                       55
Thr Ser Leu Ala Ile Ser Ala Leu Val Pro Asn Asp Arg Pro Ser Gln
                   70
                                        75
Asp Trp Gly Trp Leu Ser Met Val Ala Gly Leu Ala Val Val Lys Val
                                    90
                85
Ile Lys Glu Val Gly Gly Ala Asp Arg Ser Arg Val Thr Leu Lys Trp
                                105
                                                    110
            100
Pro Asn Asp Val Leu Val Asp Leu Asp Thr Asp Gln Gly Gly Lys Val
       115
                           120
Cys Gly Ile Leu Ser Glu Arg
    130
                       135
```

```
<210> 1591
<211> 424
<212> DNA
<213> Homo sapiens
<400> 1591
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ttcagagagg cacttgcacc tagaggagtc tctgggaagc agatggggat atgggacaga
cgcatcttga aaaageeeee agatgeetee etatggagga ceteaceeae ccacatcace
180
agtagggagc ttgggactta ccctaaccac aggggggtga ctgttgtcgt ccctgcacag
aacgtccagc gagtcctgac tttccagccg ctgcgcttca tccaggagca cgtcctgatc
300
cetgtetttg aceteagegg ceceageagt etggeceage etgtecagta etceettgae
tgtgggatcc ctggctgctc acgcccctga ggacccctcg gatctgctcc agcacgtgaa
420
attt
424
<210> 1592
<211> 95
<212> PRT
<213> Homo sapiens
<400> 1592
Met Gly Ile Trp Asp Arg Ile Leu Lys Lys Pro Pro Asp Ala Ser
                                    10
                 5
1
Leu Trp Arg Thr Ser Pro Thr His Ile Thr Ser Arg Glu Leu Gly Thr
                                25
Tyr Pro Asn His Arg Gly Val Thr Val Val Val Pro Ala Gln Asn Val
       35
                                                45
                            40
Gln Arg Val Leu Thr Phe Gln Pro Leu Arg Phe Ile Gln Glu His Val
   50
                        55
                                            60
Leu Ile Pro Val Phe Asp Leu Ser Gly Pro Ser Ser Leu Ala Gln Pro
                    70
Val Gln Tyr Ser Leu Asp Cys Gly Ile Pro Gly Cys Ser Arg Pro
                                    90
                85
<210> 1593
<211> 1678
<212> DNA
<213> Homo sapiens
<400> 1593
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60
atgagaaatq agcccattga aggcaaactc tcactgtata ggcaacaggc atctatcatt
tcccgtaaaa aagaagccaa agctgaggaa cttcaggagg ccaaggagaa gttagccagc
180
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ctagagagag	aagcatcagt	aaaqaqaaat	cagacccgtg	aatttgatgg	tactgaagtt
240					
300	atgagttcaa				
aaaaagaagc 360	atcacataat	agctgaactt	aaagctgaat	teggtetttt	gcagaggact
gaagaacttc	ttaagcaacg	tcatgaaaat	attcaacaac	aactgcaaac	tatggaggag
	tatctggata	tagttacacc	caagaagagc	tagaaagagt	atctgcactg
aagagtgaag 540	ttgatgaaat	gaaaggacga	acattggatg	atatgtctga	aatggtgaaa '
	cattggtatc	tgaaaagaag	tcagctcttg	cctcagttat	aaaagagcta
cgacagttgc	gtcaaaaata	tcaagaactg	acccaggagt	gtgatgaaaa	gaaatcccag
	gtgcagcagg	cctcgaaagc	aatcggtcca	aattagaaca	ggaagttaga
	aagaatgtct	tcaagaagaa	agtagatacc	attatacaaa	ttgtatgatt
	aagttcaact	tegtegtget	actgatgaga	tgaaggcata	tatctcttct
	aaaaaagaaa	ggcaattagg	gaacagtata	ccaaaaatac	tgctgaacaa
	gaaagaaact	tcgggaaaaa	caaaaagtta	tacgagaaag	tcatggtcca
	aagcaaaaat	gtggcgtgat	ttggaacaat	taatggaatg	taagaaacag
	aacaacaaag	ccaaacttcc	attggtcagg	taattcagga	gggtggggag
	tactgtgaat	tcttgtgtca	tcgtttgggg	ttttacttga	taccactage
	atctcataat	gtatttcttt	tttgaaactg	atttgtttag	cattttgttt
	cattctttat	taagttttca	tagaaaataa	tgttaaggta	gatttagttt
	tcatatgaaa	aagaggcttt	tattcttttc	catagtttag	acatcactgg
	gttttatgag	acaggaaact	aagtttacta	tctgtaaatg	taaacatatg
	aacatgtagt	ttttttttag	aatgtaataa	cccagtggct	tactgttttt
	tttaaaaaaa	ctttagaaga	atcttttagg	aactaatatc	tettgttetg
	tatctgacgt	tcagcagttc	ctacagtttt	acttcagttt	atttttcttc
_	aagaaaattt	aatattttga	ctaacatgtc	ttttctgttt	gtatcattta
1620 aaggcaaata 1678	aacttggtac	gtatttcata	tctatttaaa	aaatgaaaaa	aaaaaaaa
<210> 1594					
<211> 365					
<212> PRT			•		

<213> Homo sapiens

<400> 1594 Leu Glu Ser Lys Ile Asn Glu Ile Asn Thr Glu Ile Asn Gln Leu Ile 10 Glu Lys Lys Met Met Arg Asn Glu Pro Ile Glu Gly Lys Leu Ser Leu 25 20 Tyr Arg Gln Gln Ala Ser Ile Ile Ser Arg Lys Lys Glu Ala Lys Ala 40 4.5 35 Glu Glu Leu Gln Glu Ala Lys Glu Lys Leu Ala Ser Leu Glu Arg Glu 55 60 Ala Ser Val Lys Arg Asn Gln Thr Arg Glu Phe Asp Gly Thr Glu Val 65 70 Leu Lys Gly Asp Glu Phe Lys Arg Tyr Val Asn Lys Leu Arg Ser Lys 85 90 95 Ser Thr Val Phe Lys Lys His His Ile Ile Ala Glu Leu Lys Ala 105 100 Glu Phe Gly Leu Leu Gln Arg Thr Glu Glu Leu Leu Lys Gln Arg His 115 120 125 Glu Asn Ile Gln Gln Gln Leu Gln Thr Met Glu Glu Lys Lys Gly Ile 130 135 140 Ser Gly Tyr Ser Tyr Thr Gln Glu Glu Leu Glu Arg Val Ser Ala Leu 150 155 Lys Ser Glu Val Asp Glu Met Lys Gly Arg Thr Leu Asp Asp Met Ser 165 170 175 Glu Met Val Lys Lys Leu Tyr Ser Leu Val Ser Glu Lys Lys Ser Ala 180 185 190 Leu Ala Ser Val Ile Lys Glu Leu Arg Gln Leu Arg Gln Lys Tyr Gln 200 205 195 Glu Leu Thr Gln Glu Cys Asp Glu Lys Lys Ser Gln Tyr Asp Ser Cys 210 215 220 Ala Ala Gly Leu Glu Ser Asn Arg Ser Lys Leu Glu Gln Glu Val Arg 230 235 Arg Leu Arg Glu Glu Cys Leu Gln Glu Glu Ser Arg Tyr His Tyr Thr 245 250 Asn Cys Met Ile Lys Asn Leu Glu Val Gln Leu Arg Arg Ala Thr Asp 270 265 Glu Met Lys Ala Tyr Ile Ser Ser Asp Gln Gln Glu Lys Arg Lys Ala 275 280 Ile Arg Glu Gln Tyr Thr Lys Asn Thr Ala Glu Gln Glu Asn Leu Gly 290 295 300 Lys Lys Leu Arg Glu Lys Gln Lys Val Ile Arg Glu Ser His Gly Pro 305 310 315 Asn Met Lys Gln Ala Lys Met Trp Arg Asp Leu Glu Gln Leu Met Glu 325 330 335 Cys Lys Lys Gln Cys Phe Leu Lys Gln Gln Ser Gln Thr Ser Ile Gly 345 350 Gln Val Ile Gln Glu Gly Gly Glu Asp Arg Leu Ile Leu 360

<210> 1595

<211> 559

<212> DNA

<213> Homo sapiens

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<400> 1595
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gcatggccgg ggagccgccc acttggcgag gaacaggctc catagcgacc tcagaacact
ggtgctgggg cccagccagg gagagcatct tcccgctggg accttccccg gggcggctca
tecettggag atgtagggtg cagetgagat ggtggeggee ecatteetge tgttegecag
240
cctgggctgg gggtactagg atcacccttg ggctgatgag gagcccgggt cttgggcagt
taccaagtgg ggggtcacag tctggaaagt ggtggaacca agggagcggc ctcgcccagg
ccacactete aaatactgge cetegacaaa aggeagetgg geteteaaga cagggecace
teetetetge tgggecegeg eeegtggaga geaagtggga actgacceta tettetgtee
cagettggag agecageate aaggteagge eteaettgee caagaaagag gagtgaggag
gcccactgga ggaacgcgt
559
<210> 1596
<211> 166
<212> PRT
<213> Homo sapiens
<400> 1596
Met Leu Ala Leu Gln Ala Gly Thr Glu Asp Arg Val Ser Ser His Leu
                5
                                    10
Leu Ser Thr Gly Ala Gly Pro Ala Glu Arg Arg Trp Pro Cys Leu Glu
           20
                                25
Ser Pro Ala Ala Phe Cys Arg Gly Pro Val Phe Glu Ser Val Ala Trp
                            40
                                                45
Ala Arg Pro Leu Pro Trp Phe His His Phe Pro Asp Cys Asp Pro Pro
                       55
                                            60
Leu Gly Asn Cys Pro Arg Pro Gly Leu Leu Ile Ser Pro Arg Val Ile
                   70
                                       75
Leu Val Pro Pro Ala Gln Ala Gly Glu Gln Gln Glu Trp Gly Arg His
                                    90
                                                        95
               85
His Leu Ser Cys Thr Leu His Leu Gln Gly Met Ser Arg Pro Gly Glu
           100
                               105
                                                    110
Gly Pro Ser Gly Lys Met Leu Ser Leu Ala Gly Pro Gln His Gln Cys
                                                125
                           120
       115
Ser Glu Val Ala Met Glu Pro Val Pro Arg Gln Val Gly Gly Ser Pro
                                            140
   130
                       135
Ala Met Pro His Gln Ala Ala Leu Pro Gln Glu Glu Lys Gln Val Trp
                                        155
145
                   150
Ala Cys Glu Arg Asp Arg
               165
<210> 1597
<211> 609
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